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Supplement, Aug 26, 1899.

THE

CHEMICAL TRADE JOURNAL:

A WEEKLY NEWSPAPER DEVOTED TO

The Commercial Aspect of the Chemical and Allied Industries.

EDITED BY

GEORGE E. DAVIS,

FORMERLY ONE OF HER MAJESTY'S INSPECTORS OF ALKALI WORKS,
CHEMICAL ENGINEER AND CONSULTING CHEMIST.

VOLUME XXIV.

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PAST, PRESENT, AND FUTURE.

AT a recent meeting of one of the nitrate companies the chairman is reported to have stated that if one wished to see anything most depressing it was only necessary to go to a nitrate meeting. Losses, enforced short production, ruinous competition, and unbusinesslike methods generally may be most depressing to nitrate shareholders, but we imagine these items will be found equally depressing to the shareholders in the heavy chemical trade as well.

ALKALI AND BLEACH.

During the past year most heavy chemicals have been under a cloud, and there is scarcely an article to be named upon which there has been a fair profit; prices have shifted, the cards have been shuffled again and again by the larger companies in the hope of squeezing their minor brethren to the death; but they have not yet perceived that they are all of them fighting under very different conditions to those which obtained even five years ago. No one yet can say for certain whether the older chemical processes are able to survive the onslaught made upon them by the newer electrical processes, and still fewer can say with certainty what will be the outcome of the fight between the rivals, which seems to us to be so furiously raging to no purpose save that of self-spoliation.

It is too early yet to attempt to gauge the merits or demerits of the various electrical processes as contrasted with improved chemical methods for the manufacture of heavy chemicals, mainly on account of the abnormal conditions under which the manufacture is at present conducted. Electrical "bleach" is at present being subsidised to the extent of nearly £2. per ton, and we wish the Syndicate a happy new year with the 160 tons of "bleach" per week they have to dispose of. The fact is that at the present moment bleach is sick, not from healthy competition but from a deliberate attempt to strangle future competitors. It is most laughable to see how the attempt is progressing. Last year at this time it was found that sales of bleach had been made over 1898 by some makers at over £6. per ton, but by January 1st prices had declined to £4. 15s. for home sales, export bleach being considerably higher than this. At this time salt cake was selling at 17s. to 17s. 6d. per ton, a price which left at least 8s. 6d. per ton loss to the most economical manufacturer, so that the next move on the board was to "bull" salt-cake and to "bear" bleach. The result has been a complete change in the economics of bleach making. Up to a few months ago the electrolytic processes, seeing they were not makers of salt cake had a distinct advantage over those processes which made salt-cake and sold it at a loss, but now that the selling price of salt-cake approximates more nearly to the cost price, and even in some cake leaves a slight profit from the manufacture, those processes can only survive which yield *per se* the cheapest ton of bleaching powder.

It has been proved over and over again that a ton of bleaching powder can be made by the improved manganese process for about 50s. per ton, packed in hardwood casks and put free on rails at the works, leaving all standing charges out of account. We should like to see how much cheaper (if at all) bleach could be made by the electrolytic processes, or even by the Deacon process.

So much for the past and present; what is in the air for the future? Cheaper bleach during 1899. We have seen, and have had read to us a letter in which some large producers have stated their determination to smash up the before-mentioned syndicate and to drop the price of bleach if circumstances (in their opinion) demand it, to £3. 17s. 6d. per ton, and if this is not effective to go down as low as £2 15s. The first step has been taken, and purchases of bleach have been reported to us, from the largest British producers, at a price which could not have left the sellers more than £3. 17s. 6d. at their works.

The exports of alkali and bleach have declined during 1898. There were over 60,000 tons *less* alkali exported during 1898 than in 1897, which pretty well represents the American aggression. In bleaching materials there were only some 2,300 tons *less* exported. The following figures may prove interesting here :—

Exports of Alkali :	1898. Tons.		1897. Tons.
Russian	9,260	...	11,474
Norway and Sweden	5,990	...	4,770
Germany	6,623	...	8,272
Holland	5,088	...	6,381
France	2,744	...	2,544
Spain, etc	14,746	...	15,833
Italy	12,228	...	11,088
United States	39,305	...	90,638
Australasia	9,912	...	10,160
British North America	1,124	...	1,731
Other Counrries	56,489	...	62,233
Total	163,509	...	225,124

Exports of Bleach :	1898. Tons.		1897. Tons.
To United States	33,647	...	34,075
,, Other Countries	17,391	...	19,305
Total	51,038	..	53,380

It will thus be seen that the exports of bleach to the States during 1898 fell short of 1897 only by 428 tons.

TAR AND AMMONIA PRODUCTS.

It has frequently been said that the craze for cheapness, even though the article bought be dear at any price, has been the worst feature of the 19th century, and certainly with the last years of the cycle this weakness seems likely to be carried to extremes, which we trust the advent of the twentieth century may check. The pendulum has long swung one way, surely it must soon reach the turning point.

In all tar products (with one or two exceptions) it has not been the versatility of prices which has exercised the minds of men, but rather the fact that almost without intermission the mercury of the market barometer has persistently fallen, and, as with colliers warnings are frequent under such circumstances, so has it been with tar distillers. The one golden thread among the grey hairs which the troubles of the past few years have prematurely created has been preserved by the activity of *Creosote*. It stands out as the one redeeming feature of the year, during which it has been strong from start to finish. The good demand has brought the prices of ordinary and filtered qualities from 2½d. and 3d. per gallon respectively to 2¾d. and 4d., while the outlook is reassuring. Of *Benzols* it has become customary to speak with bated breath, but matters have gone so far now that this is useless. We have long become familiarised with the apparent anomaly of 90's being cheaper than 50/90's. The chief excitement has centred round the speculations concerning the bottom price which would be touched, but we seriously doubt if the 100 per cent. decline which the past year has brought about has even yet let benzol down to rock bottom. The year opened with 90's at 1s. 6d. and 50/90's at 1s. 8d., but by March the values were 1s. 3d. and 1s. 6d. This disproportion in the decline, however, was modified by the middle of April, when 90's stood at 1s. 1d. and 50/90's at 1s. 2d. With the end of the half year the shillings began to disappear, and prices had to be reckoned in pence only, so that in the middle of July both distillates stood at 10d. each for all comers. During the next three months they practically kept together (though losing ¾d. all the same), until October came with 90's at 8¾d. and 50's at 9d. Before the month was out they both stood at 8½d., and prices fluctuated within a ¼d. of this figure until the end of the year, when for the nonce 9d. was quoted. The present year has opened, however, with free talk of 8d., and in the face of the increased production, which appears inevitable, the lower value is more likely to obtain during 1899. *Naphthas* have fared no better than benzols, but values have been more eccentric in their movements. The decline has been broken by a few revivals which though short lived at least relieved the monotony and kept hope alive. Crude (30% at 120°) has suffered most. Starting in January at 9d. it soon slipped through 8½d. to 8d., and then 7d. during February and March. April brought a collapse, so that the promise of May was dispelled by the quotation of crude naphtha at 4½d. There was a slight rally in July and August, but by October the price had settled to the bare 4d. and stopped thereat till the end of the year. Solvent (90% at 160°) fared better. Opening at 1s. 8d. it kept firm for a month, and then slipped by fractions to 1s. 3d.—this again in May. In June 1s. 2d. was touch, and after a little vacillation the market value settled down in September and remained at that figure until December, though 1s. 1½d. was touched twice, once in October and once in November. *Carbolic Acids* have been fairly steady considering all things. Of course the same whittling of prices as in other products has been experienced, but in a less degree. Crude (60%), and Crystals (40%), began the year at 2s. and 7½d. respectively, and in February advanced to 2s. 1d. and 7¾d. By April crystals had declined to 7d., and in the middle of May crude lost a penny, to be followed by another in August, so that prices then stood at 1s. 11d. and 7d. From this point onward crude kept firm, and even mended to 2s., but crystals touched 6¾d., and practically kept there to the end of the year. Liquid carbolic was steady at 11d. for the first eleven months of 1898, but rose to 1s. in December and closed steady thereat. We have now done with those products which are most harrowing to follow and able to turn to *Pitch*, which affords quite a pleasant retrospect, for we can chronicle an advance for the year. January and February were dark months, the price falling from 20s. to 17s., but from March there was a steady improvement, the half year seeing the starting point regained. After a slight relapse in July, pitch never looked back again until November, but passed through 22s. 6d. in September to 23s. in October, and even higher. The next month saw a fall to 22s., but the year closed steady with a satisfactory outlook at 22s. 6d.

So much for tar products proper. In the face of such a depressing year, it may be asked if there be any tar distillers left to tell the tale, but fortunately there have been a few compensating influences, and moreover where tar goes so, very often, does gas-liquor.

Sulphate of ammonia has been all that tar products have not been, and consequently there yet remain a few crumbs to comfort and sustain those who are struggling against the reverses of the tar industry. Taking London values as the basis of comparison, the year started at £9—a pleasant change from the £7 odd of the two preceding years—the price quickly advanced to £10, at which it kept steady well into February. In April there was an unwelcome falling off to £8. 15s., and even lower, but the half year brought a change for the better, and, after creeping back to £9. 2s. 6d., the price jumped to £9. 6s, 3d. with the commencement of July. Before the month was out £9. 12s. 6d. had been recorded, and with August £10. was again reached, the month closing on £10. 5s. This figure—the highest prompt value of the year—was not maintained however, and, during September and October, values declined gradually to £9. 7s. 6d. With November the tide turned once more, and there was no further backsliding, for the year closed steady at £10. 2s. 6d.; while for forward £10. 5s. to £10. 6s. 3d. was readily obtainable. Reviewed as a whole, the progress of sulphate of ammonia may thus be said to have been most satisfactory. The outlook also is encouraging, for the mild winter has augmented the demand and done much to check the accumulation of stocks, in what is always the season of highest production. Of course, the brighter visions of the future are tempered by the possibilities of what we may term coke-oven sulphate, but, even with this cloud upon the horizon, the prospects of the immediate future are more roseate than umbrose.

THE MANURE TRADE.

Though the agricultural outlook is but little brighter than it was at the close of 1897, it is at least something to be able to say that it is no darker; if anything, there is a prospect of improvement as far as the hopes of manure manufacturers are concerned. Thanks to the spread of agricultural science and the dissemination of knowledge anent the fertilisation of crops in general, the use of chemical fertilisers is on the increase, while the possibility of the cultivation of sugar-beets becoming a regular thing augurs well for nitrogenous materials and potash. The exports of chemical manures are on the increase, while the same may be said of the imports of nitrate. *Nitrate of soda* has, and probably will for a long time to come, run sulphate of ammonia a close race for favour among the farming fraternity, but as a dividend-earner it has presented a dismal record during the past year. The shipments have been heavier than ever, but the profits have developed in inverse ratio. The price has practically been the same all through the year, ranging from 7s. 6d. to 7s. 7½d. in the first half of the year. Towards the end of July 7s. 4½d. was touched, but prices soon recovered their old level, and the year closed at 7s. 6d. As, at the commencement of 1898, negotiations are still in progress for the achievement of a Combine; but since the labours of 12 months have brought us but little nearer to the completion of the preliminaries, it is pardonable if we are disposed to doubt the probability of a "Convenio" being effected in the near future. The annual review of the markets for fertilising materials which appears regularly in these columns renders it unnecessary for us to follow in detail the movements of prices, and we shall therefore confine our attention to one or two points which have characterised the manure trade in general during the past twelve months.

In sympathy with the growing preference for compounded fertilisers—*i.e.*, those which contain the three essential elements of fertility—*Guanos* have been imported more freely. The bulk of the imports have been of Peruvian origin, about 12,000 tons having been shipped from the deposits of Chili's neighbour. The fancy prices of the last decade have given place to more rational values, based upon the percentages of phosphoric acid and nitrogen which the guanos contain; the unit values being more nearly on a parity with those of other sources of phosphates and nitrogen. *Basic Slag* has been exploited for all it is worth—sometimes for a little more—but, on the whole this product is entitled to the rapidly increasing favour with which it is meeting. The demand for *Superphosphates* has also been an increasing one, and with supplies of mineral phosphates growing scarcer, manufacturers have had their hands full. It is to be expected that prices will strengthen rather than otherwise, seeing that the tendency of raw materials is towards an advance, and freights are firmer than ever. *Anilite*, first cousin to Nitragin, has made its appearance, and promises to do for cereals what nature does for leguminosæ; so far, however, it appears to have progressed no farther than the threshold of experimental application and Nitragin itself is as yet likely to remain in leading strings for a good time to come. *Potash Salts*, being regulated essentially by the foreign producers, have pursued the even tenour of their way at prices which, if satisfactory to the producers, have by no means been detrimental to their unstinted use for agricultural purposes. The success with which the give-and-take principle has been applied to them, must have occasioned envy amongst those who have had to contend with the fierce competition of an open market in fertilising materials.

The use of *bouillie bordelaise* and other spraying liquids and powders for the prevention of phylloxera and potato diaease, has been much in vogue, especially in Ireland, where good results have accrued, but this can scarcely be deemed sufficient cause for the improvemeut in the price of *copper sulphate*, which amounts to 45s. per ton for the year, making a net gain of 10s., after allowing for the decline in 1897. This change has, of course, been distasteful to the makers of insecticides, but was to be expected seeing how substantially copper itself appreciated in value. The year opened with sulphate at £16., and continued to rise till June, when it fell to £15. 15s. It recovered in July, reached £18. in November, and closed at £18. 10s.

Before leaving this section we should like to call the attention of superphosphate makers, and dealers in mineral phosphates, to the fact that in our forthcoming Special Issue (*vide infra*) we shall offer to the trade some tables, designed to facilitate the economical production of "supers" and the taking of the titre of raw phosphates; which tables we believe will prove as useful in daily practice as they will be unique.

PAINT, COLOUR, OIL, AND VARNISH MANUFACTURERS.

In *Paints and Colours* the past year has been an active one. The mild weather helped to extend the limits of the "season," which opened early and enjoyed a brisk trade. At all the chief centres the retrospect has proved satisfactory if not something even better. The development of the ready-mixed trade is perhaps the most striking feature of the past 12 months; while for the year we have just begun there is every promise of a continuance of good trade. Contracts are not wanting. The building trade is active, and there is peace in the ranks of the employees, be they parties to the production

or the application of paints. *Seed crushers* have not experienced any very serious reverses, and that alone is a cause for congratulation. There has been something akin to a scare about the growth of solvent extraction processes, but we are slow to think that chemical processes will materially prejudice mechanical methods in this particular sphere, as witness the extensive new mills which the African Oil Mills Company have almost completed in Liverpool.

Oils generally leave no room for complaint, save an occasional croak here and there. North Britain is dealt with in our special report (p. 8), but in the Hull and Liverpool districts, Castor, Palm, and Olive have all been able to show a fair record of business, especially the latter two. Scarcity has of course favoured Olive. The Palm oil market is full of promise and healthy. In seed oils, linseed and cotton seed ruled firm with the exception of a temporary drop in the middle of the year, but the turnover has been reassuring. Fish oils have been to the fore, and the trade in them will, we think, prove a growing one despite the fact that the year closed rather quiet. Petroleum promises to develop rapidly during the present year, and, with the spread of fairly high-flash oil, the outlet for warming and cooking purposes will doubtless expand. At the same time prices show no signs of flagging.

Rosin has been in good request at prices which have certainly favoured sellers, but there were several reasons for this, apart from the serious loss of stocks by fire in America, so that consumers were more or less prepared to face a very strong market, and acted accordingly as far as circumstances would permit. It is hardly surprising, therefore, that *Spirits of Turpentine* should be able to show a very substantial advance at the close of a year which opened strong, and, with one or two exceptions, evinced no tendency to relaxation during the whole twelve months. White lead, made by various processes, has entered into closer competition with the old stack-made product, but apparently without proving detrimental to the trade in the latter. In conclusion, we have to record the extinction of at least one rival, if we may so call it, by the voluntary liquidation of the long-suffering White Lead Co., Ltd.

GLASS, BRICK, AND TILE MANUFACTURERS.

The *Glass* trade has not shown much improvement, and in some sections the outlook is rather depressing. Table and fancy glass manage to hold their own fairly well, but for the best qualities only, the competition of the Continent and Scandinavia having cut into the medium class trade. Raw materials generally have been steady in price, but a few of them, such as salt-cake, and fuel, have advanced in price. What the trade for illuminating purposes has gained by the extension of electric light it has lost in gas and oil, and is likely to suffer further shrinkage, since the introduction of the new Welsbach burner, for which no chimneys are required. In brief the past year has been a dull one, and the prospects of the future are overcast.

In the *Pottery and Brick* trades there has been a fair amount of business, and the former in particular has received much attention from the public owing to the widespread discussion of the lead poisoning question. This attention, however, is not of the paying order. The efforts to introduce leadless glazes have been redoubled with some measure of success, but much remains to be done in this direction. The ventilation of this subject has at least done good in one way. It has given prominence to the duties and responsibilities of the employed as well as those of the employers. The trade has its dangers, but they are heightened by the careless indifference or wilful foolhardiness of many of the workers; while not a little light has been thrown upon the reasons why the pottery trade is so popular with a certain labouring class, by the revelations concerning the premeditated "lead poisoning" which is practised by the residents in the locality, some of whom do not work in a pottery at all.

The closing feature of the year has been the conversion of the business of the well-known firm of Doultons into a limited liability concern, which change has not been effected without considerable fluttering in the dovecotes of the stock and share dealing world.

So once more we have progressed from trade to trade until we come to those whom we must class as

OUR READERS IN GENERAL.

The opening passages of our review have shown that paper-makers and bleachers have been in clover as regards the cost of alkali and bleaching powder, while dyers and calico printers have almost fared equally well. We know they have had their losses and trials in other directions, but it is well for them that so substantial a compensation should be forthcoming. The close of the year has seen the combination of Bradford dyers carried to finality—or, rather, should we say, duly inducted and launched upon its career. In our *Special Issue*, which will appear on January 28th, we shall endeavour to give our readers a closer insight into the possibilities of the alkali trade at home and in the United States, so that by forecasting this staple industry, every branch of the chemical trade—be it oil refining, brewing, glue and size, salt, soap, or candle manufacturing—will be able to discern as far as possible the mysteries of the about-to-be, and exercise discretion in the formulation of their plans for the future. We shall also deal with the rise and growth of the coal-tar colour industry, as well as furnish a collection of technical articles of service to the chemical, paint, oil, and engineering industries. Thus of ourselves—enough. Of our readers, also, there remains but little more to say; but in that little, though coming last, there lies the germ of hope and courage, which if properly nurtured will, we believe, enable us to tide over the shoals and quicksands of the present, and float into the safer and deeper waters which are not unwisely hoped for in 1899 So to the point—and allow us (in all sincerity and good fellowship) to wish our readers, home and foreign,

"A Progressive and Prosperous New Year."

Mid-Kent Coal Syndicate.—At the second ordinary general meeting of this undertaking, held last week, the newly-appointed Chairman (Mr. C. H. Tindal) moved the adoption of the report and accounts. With regard to the Kent coal enterprise generally, all he could say was, from what he had seen going on at Dover and in other parts of the country, they might have coal there within a measurable distance of time. With the continuity of the coal area they might, he thought, look for some very substantial results, which would have the effect of transforming the neighbouring towns and villages in the county of Kent into manufacturing centres. If this came to pass, they must be participators in that prosperity, and they would have every reason to congratulate themselves upon the investments they had made in this company. They were watching with considerable interest the development of the explorations of the other Kent companies, and they contemplated the possibility, by such information as might thus be obtained, of acquiring further estates for the purpose of starting a second bore-hole. Mr. W. J. Carsens, who seconded the proposition, narrated to the meeting the results of his observations at the fields, observing that he believed there was every possibility of their being on the coal at Dover within the next six or seven months. The coal, however, lay at a considerable depth, and they must continue the boring operations if they wished to strike it. In one of the pits they struck the 1,382-foot a few weeks ago, and the results were satisfactory. The report was adopted.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Apparatus for the Purification of Sewage. E Green. 26,730. December 19.
Non-poisonous, Strike-anywhere Matches R. H. Jude. 26,754. Dec. 19.
Purification of Brine. G N. Vis. 26 777. December 19.
Treating Sewage, etc. D. England, G. France, and T. H. Shaw. 26,824. December 20.
Treating Oleaginous Seeds. A. Euston. 26,849. December 20.
Oil Cake Forming Apparatus. A. Euston. 26,850. December 20.
Metallic Tin from Oxide or Dross. J. C. Taliafe-ro. 26,877. December 20.
Improved Filter-presses. J. Wilson. 26,931. December 21.
Refining Mineral Oils. Mineral Oils Corporation, Ltd., and W. B. Price. 26,993 December 21.
Packing White Lead. R. Matthews. 26,997. December 21.
Manufacture of Cement. C. F. A. E. H. von Forell. 27,008. December 21.
Burning Sludge and Waste Gases, etc W. Horsfall. 27,070. Dec. 22.
Producing Acetyl Salicylic Acid. H E. Newton. 27,088. December 22.
Non-poisonous White Lead (Sulphate). A. A. Millns. 27,136. Dec. 23.
The Acid Bleaching of Peppers. P. C. Bunn. 27,188. December 27.
Manufacture of Polysulphates. C Uebel and Chem. Fab. Rhenania. 27,240. December 24.
Treating Sulphide Ores. C. Uebel and Chem. Fab. Rhenania. 27,241. December 24.
Using Potassium and Sodium Carbonate Lyes. H. Glaubitz. 27,265. December 24.
Aerating and Purifying Water. R. J. Cook and H Whaley. 27,267. December 24.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

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A Process for Obtaining Metallic Nickel from Nickel Carbonyl and Apparatus therefor. L. Mond, 20, Avenue-road, Regent's Park, London. Eng. Pat. 1,106. January 14, 1898.

The gases containing nickel carbonyl as obtained according to patent 12,626/90, are passed over nickel shot or granules kept at 200°C. At this temperature the carbonyl is decomposed and metallic nickel is deposited on the shot, which increase in size until they attain handy proportions, when they are in a form convenient to the manufacture of nickel alloys. In order to keep the shot from adhering to each other, they are kept in constant motion. The apparatus necessary for executing this process is illustrated by five figures. (See also *C. T. J.* Nos. 497 and 499, pp. 337 and 369.)

Improvements in Evaporating or Concentrating Apparatus. J. Mc Neil, Iron Works, St. Helen-street Govan, N.B., and J. Lewkowitsch, Lancaster Avenue, Manchester, Eng. Pat. 28,747. December 6, 1897.

The apparatus is of the vertical type with a domed top. In the lower part of the vessel is a hollow drum revolving on a horizontal axis, which is heated with super heated steam. This axis is hollow, and by the aid of a scoop affords a means for discharging the water of condensation. The saline, etc., constituents of the solution are deposited on the drum, removed by brushes and scrapers, and discharged through a valve at the bottom of the evaporator. There are two figures.

Cooling Device for the Discharge Mains or Pipes of Ovens, or Gas-producing Apparatus through which the gases are led off for the Condensation of Tar, Ammonia, Benzol, and other Products therefrom, and for use as Illuminant, Fuel, and the like. R. Boecking, Halbergerhütte, near Brebach a/Saar, Germany. Eng. Pat. 2,539. February 1, 1898.

The rising main is water-jacketted and water-cupped, so that the gases are cooled directly they leave the oven. A portion of the water evaporates and is carried off by the gases, but all the hard distillation products are caught and fall back into the oven. There are two figures illustrating the device, which is very simple and for which many advantages are claimed.

Improvements in the Process for the Manufacture of Carbide of Calcium, and Apparatus therefor. G. Bower, St. Neots, Hunts. (communicated by J. E. Hewes, 421, Chestnut-street, Pa., U.S.A.) Eng. Pat. 1,984. January 25, 1898.

The furnace is vertical. The bottom forms one electrode, and the other is of the usual vertical adjustable type. The lime and carbon are mixed into pastilles, and the current passed whereby chemical combination results and a combustible gas is generated. By the aid o tuyeres entering the sides of the furnace, air, mixed with gaseous fuel, is introduced so that the gas generated is burnt in the interstices between the pastilles. There is one figure.

Process for Rendering more effective Lead Thiosulphate as Constituent Part for Priming or Firing Compounds. E. Gurovits, Auerspergstrasse, No. 4 Vienna, I., and M. Bals, Lerchenfelder-strasse, No. 141 Vienna, VII. Eng. Pat. 2,419. January 29, 1898.

In order to avoid some of the standing objections to lead thiosulphate as a component of priming or fixing compounds it is intimately mixed with bichromate of potash before adding the binding materials. Thus the 100 parts of lead thio-sulphate and 50 of potassium bichromate 150 to 200 parts of water (or an equivalent of steam) are mixed. A compound is thus obtained, the perfected nature of which is indicated by its spontaneous heating. The water is then practically evaporated, some or all of the binding ingredients added, and the whole evaporated to dryness.

Improved Soap Compound, which can also be used as a Combustible Deodoriser, and Process for the Manufacture of the same. R. Adam, 7, Göbenstrasse, Berlin. Eng. Pat. 21,363. October 11, 1898.

Spirit of wine, of 85 to 96% strength is heated nearly to boiling point, and 10 to 35 % of melted soap or soap powder, together with 5 % of glycerine are stirred in. In order to avoid the smell of burning soap particles when used as a deodorizer, 0·25 % of balsams of Peru and Tolu is incorporated, and the mixture packed in air-tight cases.

THE MANCHESTER SEWAGE PROBLEM.

THE following letter from Sir Bosdin Leech, chairman of the Rivers Committee of the City Council, has been addressed to Sir John T. Hibbert, chairman of the Mersey and Irwell Joint Committee:—"I am now able to enclose preliminary report of the experts, and also to say that the Local Government Board will hold their inquiry in Manchester on the 12th of January, 1899, and that they appear desirous of facilitating our proceedings. The inquiry in the first instance will be directed to matters of principle, and it will certainly be necessary for the inquiry to be adjourned, so that detailed plans and estimates may be prepared. I have just learned that the Mersey and Irwell Joint Committee at their last meeting determined to omit their January meeting, and adjourned to the first Monday in February. As the summons issued by the Joint Committee against this Corporation for penalties will again come before the County Police Court on Friday, the 20th January, it will probably be desirable that, as suggested by Mr. Hulton in a recent conversation with the Town Clerk, the summons should be adjourned to the 20th February. The Joint Committee would then at its meeting in February not only have before them the experts' report, but also what has taken place at the Local Government Board inquiry, and they would then be in a position to determine what further extension would under the circumstances be suitable. At our interview with the Joint Committee on the 3rd July last, when an extension of time for six months was granted, we hoped that the three experts would within that time present their full report as to the best means of treating the sewage so as to meet the requirements of your Joint Committee. As the investigations of the experts were to be thorough, and might assist in the solution of the sewage difficulty throughout the country, they have had a free hand, and all their wishes and instructions have been complied with, regardless of cost." A somewhat similar letter was also addressed to Mr. Killick, informing him at the same time that the preliminary report of the experts showed that the whole of the Manchester sewage could be dealt with by bacteriological treatment. He was also reminded that the Council had sanctioned the scheduling of 213 acres of land at Carrington and Flixton with a view to meeting the requirements of the Local Government Board, and that an application had already been made to the latter body for permission to borrow £160,000. for the provision of the filter beds necessary for carrying out the bacterial method of sewage treatment.

A NEW ENGINEERING MONTHLY—A new engineering magazine made its first appearance last month under the title of *The Engineering Times*. Its idea, we gather, is to cater for a class of readers who do not want a technical paper, but, at the same time, may wish to have an idea of the latest engineering practice from a popular point of view. We do not favour this class of writing as regards engineering, as we think that to be of any service such a work must be technical to be practical. The articles seem to us to savour of the trade circular, and appear mostly to be written by one of the staff, or a member of the various firms who are advertising in the magazine. The editor invites particulars from firms who are willing to supply any interesting account of their works or specialities, which will be inserted free.

INDUSTRIAL REVIEWS OF 1898.

Aluminium.—What we foreshadowed a year ago in regard to this new industry has fully come to pass; the trade is growing rapidly, and every day new uses are found for the metal. The works at Foyers, Larne, and Milton, Staffordshire, have been actively engaged during the year.

In July last a new company, Scottish Aluminium, was incorporated, in which the British Aluminium Company are largely interested. This company bought two works in Greenock; one is being used as a foundry, and the other is being converted into rolling mills. The foundry was started at the beginning of December, and it is hoped that the rolling mills will be ready some time this year. It is interesting to note in passing that a new industry is taking the place of a decaying one. The works acquired on the east and west side of Dellingburn Street were formerly occupied on the west side by Ballantine & Rowan, sugar refiners, and on the east by Neil & Co. for a sugar house, but no refining has taken place for 30 years. It is to be hoped for the good of Greenock that Scottish Aluminium will not only acquire more ground themselves, but be the means of bringing around them many smaller allied industries. These new works of Scottish Aluminium are being laid down on the most approved methods, and will do much to increase the popularity of the metal.

We noticed at the recent plumbers' exhibition held in Glasgow a fine show of cast aluminium cooking utensils by the Falkirk Iron Company, and were sold, all to one buyer, for shipment to Australia. Cooking utensils have formerly been imported from America under royalty to the British Aluminium, but we are glad to see these being manufactured locally. There is no doubt that aluminium is the finest metal for cooking utensils, being only a third of the weight of any other metal used for this purpose. Further, it cooks quickly, and never imparts a burnt flavour. It is a conductor of heat, and therefore a coal saver.

Aluminium is likely to be largely used as an electric conductor. It has been used on a large scale in transmitting the power from one of the large waterfalls in Seattle - the distance being over 80 miles. The conductor is composed of 97½ per cent. pure aluminium, the remaining 2½ per cent. copper, silver, and iron. The power transmitted is 10,000 horse-power, and the results most satisfactory—the conductor being economical, of great solidity, and of high conductivity.

Printers and lithographers are using the metal largely, and last month a company was floated for the purpose of specially preparing sheets to take the place of lithographers' stones. The saving in cost of handling alone is enormous. Messrs. David White & Co. have built quite a fleet of aluminium boats during the year, and at the moment they have three on hand. They built one in 1898 for Klondike 18 feet long, and which weighed only 1cwt. 3qr. and 18lb. It seems bound to come more and more into use in shipbuilding. At the present moment a lot of plates are on order for doors in a torpedo boat. Owing to the disastrous effects in the recent Spanish-American war from wood splintering, this question is engaging the attention of various Governments, and we should be surprised if wood is not largely superseded by aluminium for the purpose of all cabin fittings—doors, bed-places, tables, chairs, &c. We look forward, as we said a year ago, to this industry becoming one of the biggest and most important in the United Kingdom.

Flint Glass.—There has been no improvement in this trade during 1898, but, on the contrary, it has been duller than in 1897, and as materials—fuel, &c—have been higher in price, and owing to foreign and British competition prices have been lower, the net result is a far from profitable year's trading. In Glasgow a large trade is done in glass for illuminating purposes. The demand for glass for electric lighting has increased, but that for gas and oil lighting has diminished, the trade having been checked early in the year by an announcement that a new Welsbach incandescent burner would be introduced soon, which would give an increased light at a much smaller consumption of gas than the Welsbach C burner, which had been so long in the market. The consequence was, purchasers determined to reduce their stocks and cease buying till they saw the new burner. The new burner was not introduced till late in the year, and although the light is undoubtedly superior and the consumption of gas less, yet by many it is not liked so well as the old burner, and is not likely to entirely supplant it.

The demand for chimneys for gas and oil lamp purposes has increased, as, although much higher in price than those of foreign make, many purchasers do not object to pay it, as they are made out of superior materials—red oxide of lead, pearl ashes, &c., being used just as in crystal glass. Proper attention is paid to the annealing, so that they stand the heat better, and do not sweat or become dim like foreign ones, which are made out of "verre blanc," as the French call it—that is, glass made without lead, and, instead of pearl ashes, a cheap soda alkali is used in making the composition for the production of the glass.

Exports have fallen off during the year. The United States demand for superior coloured glass from Glasgow has almost ceased. The war with Spain, the increased duty under the M'Kinley tariff, and the Americans now making large quantities of the tinted and decorated goods themselves, may be the cause, and considering their rapid mode of working and their various improved appliances it is quite within the range of possibility that they will be sending blown, hand-made, and decorated glass into this country, just as they are now sending pressed moulded glass, cast-iron pipes, and many other kinds of goods. Shipments of glass from Glasgow to Canada, South America, and Australasia have been less than in 1897.

Comparatively little table glass is now made in Glasgow, the trade having gone to a large extent into the hands of Belgian, French, German, Scandinavian, and other foreign firms. The same may be said of the table glass trade in England, where, with the exception of richly-cut, engraved, etched, and so-called intaglio goods, very little is being done. The "intaglio" work is beautiful and effective. It is done upon a glass-cutting lathe, similar in construction to a glass-engraver's lathe. The workman, who is generally one who has had artistic training and a glass engraver, works in the same way as a glass engraver, who holds the glass under the wheel to be decorated, and not over the wheel, as is generally done in ordinary glass cutting. The one is called under-hand cutting and the other over-hand cutting. In glass engraving copper wheels and emery powder are used, but for the "intaglio" work stone wheels are used, with water dripping upon them. The patterns are cut in by the stones ("smoothed" in, it is termed), and after that the pattern or decoration is polished with a brush wheel and a mixture of pumice stone, rotten stone and water, and if a higher polish is required, a mixture of the oxides of lead, tin, and water is used upon a wheel brush. The polishing is generally done by an ordinary flint-glass cutter, and not by an "intaglio" workman. At one works the cutters refused to brush the "intaglio" decorators' work, and their employers resorted to the polishing of the smoothed in "intaglio" work by brightening it with hydrofluoric acid. The lathe used by the "intaglio" workmen is precisely the same as used at Haida, in Bohemia, for under-hand glass-cutting, and a Glasgow firm had one made 35 years ago from the sketch of a German glass-cutter named Heller. When he entered their employment he worked upon it several years, but at last worked over-hand on the ordinary glass-cutter's frame, as he found it easier than underhand work. He was a steady, thrifty workman, and is now carrying on business in the city on his own account as a beveller and decorator of plate glass.

The flint glass trade is not an increasing one in the United Kingdom, and a less number of workmen are now employed in it in Glasgow than there were 40 years ago. Whether when more attention is paid to technical education it will improve remains to be seen, but it is not likely if the rising generation is to be considered fully fitted to fight the battle of life, who, when they have been crammed to pass a low standard are allowed to go free and forget in a few months what they have learnt. It is not to be expected that they will be able to hold their own or make progress in the world in competition against art-trained and technically-trained, thrifty, industrious foreign workmen, who are compelled (if compulsion is requisite) to attend evening art, technical, or other classes after commencing work. Such schools are provided almost at their doors (such as at Haida, a small village, one might call it, in the centre of the Bohemian glass industry) by the Government, and all free, even books, drawing boards, slate pencils, and every requisite, so that there can be no excuse for not being educated. We must not shut our eyes to the fact that the glass trade and many other trades are passing into the hands of foreign manufacturers, who nearly monopolise certain branches in our home trades, and shut us out entirely in some foreign markets.

Fertilisers.—The position of the fertiliser trade has been satisfactory, and improved prices have generally to be recorded. The quantity of nitrate of soda consumed during last spring was the largest up to the present, and showed an increase on the previous year's of over 10 per cent., but the price ruling was about 7 per cent. lower. We enter the coming spring with a supply in sight about 6 to 8 per cent. over that at date last year, and a price nearly the same, with the prospect of a consumption possibly greater should weather be suitable. Competition amongst producers and increasing production always anticipating the increases in consumption have kept prices at an unremunerative point, which has been aggravated by their seemingly narrow-minded policy when meeting questions seriously affecting the welfare of the industry. Continued efforts to form a basis for an equitable restriction of production are still in progress, but their immediately successful issue is generally regarded as improbable on account of the conflicting views on equity held by producers. A continuance of present prices would no doubt effect sufficient restriction while depriving producers of over a million sterling annually. Sulphate of ammonia, owing to its supply and demand being now about balanced, has maintained a level of price about 20 to 25 per cent. over that of nitrate, whereas, two years since, it had touched a price 10 per cent. below nitrate. This and the proportionately enhanced costs of nitrogen in every form, excepting nitrate of soda, are features calling for note. The value of phosphate has

improved fully 25 per cent. during the year, but the greater part of this benefit has fallen to the shipowner for freight. Peruvian guano shipments have taken place to a very small extent, and, although the more regular condition and lower price have stimulated demand, it is improbable that the margin will admit of more extended shipments unless with a lower range of freights.

Nitrate of Soda.—The year's deliveries and exports from the United Kingdom ports reach about 130,000 tons, and those from Continental ports (including Harburg) about 910,000 tons, against respectively 107,000 and 870,000 tons last year, 105,000 and 840,000 in 1896, 115,000 and 778,000 in 1895, and 117,000 and 768,000 in 1894. The total exports from all the nitrate ports during 1898 are estimated at about 1,260,000 tons against 1,060,000 tons last year, 1,075,000 in 1896, 1,210,000 in 1895, 1,075,000 in 1894. Production during the year has exceeded shipments by about 30,000 to 40,000 tons, consequently a larger stock, to about this extent, probably remains in producers' hands. There has been no combined restriction of production, but, out of eighty existing oficinas, about thirty have been silent during the greater part of the year, on account of the unprofitable prices With a view to endeavouring to arrange a combination to regulate production over the next five years, a commission of experts has assessed the producing power of all existing oficinas at over 2¼ million tons per annum, which, at present power of consumption, is nearly double the requirements. Many producers, however, being dissatisfied with their individual assessments, an immediate agreement to restrict on this basis is considered doubtful. The visible supply for Europe, which might probably be available during next four months, consists of stocks in ports 132,000 tons and afloat about 560,000 tons, or a total of about 692,000 tons, against 633,000 last year, 690,000 in 1896, 685,000 in 1895, and 595,000 in 1894.

Sulphate of Ammonia.—The opening value in January was £9. 5s. per ton, and at the end of June it stood at same figure; since then it has touched £10. 7s. 6d., and closes at £10. 2s. 6d. to £10. 7s. 6d. per ton. Consumptive demand has throughout kept pace with production, and stocks have never accumulated. How far the altered relative prices of sulphate and nitrate may increase the consumption of the latter to the detriment of the former is uncertain, but, whereas, two years since, the unitary cost of nitrogen in the former stood 25 per cent. below the latter, nitrate at to-day's price is nearly 10 per cent. the cheaper. The combined action of ammonia producers to popularise this product continues.

Guano.—The year's imports into Europe of Peruvian are about 12,000 tons, and the quantity afloat and shipping is limited to a few thousand tons. Prices being now based more on a par with the value of phosphate and ammonia from other sources, an extended demand would be met with were it possible to import at a profit at current values, but at recent freights this seems improbable. Imports of other guanos have been on a limited scale.

Bones and Bone Ash.—The total United Kingdom imports of bone material for the year are about 55,000 tons, against 55,000 tons last year, and 65,000 tons in 1896. In sympathy with other sources of phosphate and nitrogen and the falling off in supplies, chiefly from South America, values mark an advance during the year of 15s. to £1. per ton for most descriptions at present quotations of £4. to £5. per ton.

Mineral Phosphate.—Consumption has been on a full scale, and manufacturers of superphosphate have their resources taxed to the utmost to meet demand. Prices of the raw mineral have continued to advance, and, on all descriptions, from 20 to 30 per cent. of an improvement from the lowest point last year has to be recorded at present quotation of 6½d. to 8½d. per unit per ton. Freights from the sources of supply have advanced considerably, and absorb a large proportion of this advanced value.

THE USE OF MECHANICAL POWER IN GERMANY.—Latest official statistics of the German Empire show that there is used by the German industries, including commerce and traffic, horticulture and stock-breeding, a total of 3,421,194 horse-power. The various sources of power are given in the following table:

Source.	Horse-power.
Wind	18,364
Water	629,065
Steam	2,715,078
Gas	53,841
Petroleum	7,240
Benzine, gasoline, etc.	3,501
Hot air	1,298
Compressed air	11,162

Electricity was employed in 2,245 establishments. In the mining and iron industry there were employed 994,050 horse-power, or almost one-third of the total. In the manufacture of food stuffs 686,279 horse-power were used, in the textile industry 514,986, in the machine industry 182,767 and in the chemical industry 83,164,

Legal Intelligence.

HIGH COURT OF JUSTICE.

QUEEN'S BENCH DIVISION.

MACTEAR *v.* THE COMMERCIAL DEVELOPMENT CORPORATION.

Mr. Houghton said the plaintiff was a chemical expert of considerable experience, practising in Victoria-street, London, and the action was brought to recover £260., the amount of his professional fees, for services rendered to the defendant company in connection with a patent case in which they were concerned. The defendants had paid half the amount into court, and said that was enough. Plaintiff's case was that the fees were agreed when he was first retained, and that the correspondence put the defendants out of court. Plaintiff said the only discussion that took place was as to the amount of the retainer, and that he agreed to accept 20 guineas as retainer, 15 guineas a day for his services out of court, and 20 guineas a day for his services in court. The action in question was one by the Castner-Kellner Alkali Company against a Mr Rodin, whose patent the defendants were working, and it was an action which imperilled the very existence of the company, because it was held that their patents were an infringement of someone else's. For the defence, Mr. Bartlett, the company's secretary, denied that any fees at all were mentioned at the interview. The only discussion, then, was about the retainer. All the other experts had been paid smaller sums than the plaintiff claimed, and in no case was any agreement made with them as to the fees they should receive in or out of court. Mr. Justice Grantham said he had come to the conclusion that there was no direct evidence on one side or the other upon which he could act, but while he thought the amount plaintiff claimed was too much, he thought the amount defendants had paid in was not enough, looking at the circumstances of the case. His judgment would be for £60. 4s. 9d. beyond the amount paid into court, with costs—that was, 3½ guineas a day more for the work done out of court and 5 guineas more for the work done in court than the defendants had paid.

CHANCERY DIVISION.

(Before Mr. Justice Byrne).

HAWLEIZEH *v.* THE UNITED ALKALI CO., LTD.

This case was a summons by the defendant company for an order of the Court to stay this action. It appeared that the plaintiff, Dr. Hawleizeh, who is the inventor and patentee of the ammonia soda process of manufacture carried on by the defendant company at Fleetwood, entered the service of the company in 1892, under an agreement to organise the factory, and on its completion to superintend the manufacture. The agreement was for a term of seven years, giving his exclusive services. He had a special retaining fee and a salary of £1,250., with a claim to an additional £250. a year whenever the profits of the works amounted to £10,000. and upwards. There was a condition in the agreement that he should take out letters patent for any invention he might make while in the service of the company. It was agreed that in case of any dispute arising between the parties it should be referred to arbitration. The plaintiff, under that agreement, remained with the company till quite recently, when, although the term of the agreement had not expired, it was terminated by mutual agreement, in consequence of disputes that had arisen. In the year 1895 plaintiff invented a process, and applied for a patent for the United States in the manufacture of bi-carbonate, which, in August, 1895, he assigned and transferred to the company, and in pursuance of the agreement plaintiff now claimed the letters patent for America for this process. In the early part of last year (1898) disputes began to arise Mr. Roche was selected as arbitrator, and heard the evidence and arguments of both parties, and decided that he could not determine the question as to the additional salary and the royalties without investigating the books and accounts, and the question as to the American patent stood over for consideration at an adjourned meeting. Before that meeting was held the plaintiff, who thought the arbitrator was against him, gave notice to the other side that he would withdraw the question of the American patent from the arbitration. This the defendants objected to, saying that the question had been submitted and that the plaintiff was not entitled to withdraw. The plaintiff, however, insisted, and the writ in this action was issued, and the defendants desired to have an order of the Court to stay the action and for the arbitration to proceed. After argument, it was arranged that both parties should undertake that no objection should be made by either of them to a special case being stated by the arbitrator.

ADVANCE IN THE PRICE OF COAL.—It is stated upon reliable authority that the Lancashire coal-owners will, early in this year, advance the price of coal another 10d. per ton.

THE SCOTTISH MINERAL OIL INDUSTRY DURING 1898.

An incident which indirectly opened up the prospect of better times for this industry was the final action of the Petroleum Committee, after numerous sittings, and a session which lasted over the best portion of two years. The leaders of the Scottish mineral oil and paraffin manufacture had not taken an active part in the agitation, but they had been watching its course sedulously, and a few of the chief experts of the trade had been called upon to give evidence before the Committee, and had done so to the best of their ability. On June 24, 1898, the Petroleum Committee reached the end of the laborious task to which it had become committed, finding, after fully weighing a mass of sadly conflicting testimony, that the existing statutory flash-point rule required amendment. In its actual incidence it formed a palpable menace to life and property in Great Britain, and in point of fact its operation over a series of years had resulted directly in the loss of many lives and in the destruction of a mass of property. A statutory flash-point so low as 73° permitted the importation of burning oils which lead to many explosions. This dangerous species of oil came almost exclusively from the American petroleum refineries, and it formed a curious comment on British laxity when it came to be shown that the State laws prohibited, as dangerous to life and property, the use of such low flash-point oils in America itself. The Scotch refiners had been taking no advantage of this legislative laxity in Britain as regards low-flash oils. They, as a habit, had always extracted the major portion of the paraffin-spirit—that is, the naphtha from their oils—and invariably sent out their illuminants for consumption at a flash-point not lower than 100°. Their naphtha they have always marketed as naphtha, and not (as they might legally have done) as a deadly ingredient in the oils sold for burning consumption over all parts of the land. The Petroleum Committee came to the conclusion that in the interests of public safety the statutory flash-point of burning oil should be raised to not less than 100°, and the members accordingly formulated a recommendation to that effect. This was great gain prospectively for the country; but substantial profit cannot be reaped until the necessary return is consummated in Parliament, and the recommendation of the committee takes the potential form of a full enactment. Meanwhile, some good has indirectly been done to a great home industry. The American petroleum ring has been humbled a little, and its members are now disposed to adopt conciliation (in lieu of aggravation) in their communications with the chiefs of the mineral oil and paraffin industry of Scotland. They probably want to gain time, and they live in the hope that, after all, no action will be taken in the British Parliament to stop the importation from the United States of the low flash-point oils, which at present they are privileged to send to Great Britain as a convenient "dumping" ground. American petroleum has been allowed to go up in price on the British markets. At the beginning of 1898 Scotch burning oil stood at rather under 6d. per gallon delivered, and at this figure it was not remunerative to the bulk of the makers. One or two of the works, with plant of the most modern description, could make ends meet, but the others were less well placed and could not. When the new season's contracts fell to be fixed, that is August or September, it was found that a farthing advance was procurable. The article has further strengthened since, but the Scotch makers will not receive any benefit therefrom until next year (1899), when the annual time for contracting again arrives. American action thus benefiting the Scotch makers has not stopped at burning oil. Lubricating oils imported into this country have been advanced 5s. per ton in some of the grades, leading to a corresponding bettering on the part of the home-manufactured lubricants. The most striking benefit, however, is that which has occured in solid paraffin. Owing to low-priced American importations this article had been run down so that no profit was left in it. Most of the makers found that the manufacture was a dead loss, with prices so low as from 1⅜d. to 2d. per lb., according to degree of refinement. Just as matters looked very desperate indeed, the American price (about October) was put up one-eighth of a penny. The Scotch makers followed, but, owing to the contract system in vogue, they had no chance of realising more than fractional benefit at once. An arranged conference soon after came about between the American and the Scotch makers, resulting in an understanding that a further one-eighth advance is to take effect as from the beginning of the year. This is a very important matter for the Scotch industry—that is to say if the understanding is honestly respected for any length of time by the Americans. The solid paraffins will in this case once more become profitable. The only other chief products of the industry still to be dealt with are sulphate of ammonia and naphtha. The former has been doing fairly well all the year at from £8. 15s. to £10 5s., f.o.b. Leith. Latterly it has kept close to £10. Naphtha also has done well, though it is only of minor importance as to bulk. The range has been from 6½d. to 8½d. per gallon, closing at about 7¾d. Candle-*making* has been very unprofitable, owing to over competition and a depressed market in solid paraffins; but with the recent improvement in the latter, the look-out over the candle-making trade, for the new year now entered upon, has come in for some brightening.

As the improved aspect of the market did not supervene until comparatively late in the year, it is not to be expected that the general financial squaring up, which takes place in the Spring, will show to much advantage. The Broxburn Company contrived to repeat its 7½ per cent. to ordinary shareholders, but more by dint of lowered costs in production than anything else. Everything considered, this Company did admirably, but then its conditions of working, at present, are much more favourable than any of the rest. It was the only one of the Spring balancing lot that furnished any dividend to ordinary shareholders. The Pumpherston Company did well also, clearing all charges and burdens, but without touching the mark of anything for ordinary dividend. The same may be said of the Oakbank Company. The Linlithgow Company made a loss of £804. and thus did about the same as the foregoing year. The Holmes Company, working under the extra disadvantages of forced interruption because of defaults in their mines, &c., realised a loss on the year of £4,280.—rather a serious affair. Young's Paraffin Light and Mineral Oil Company were unfortunate, and made a deficit of £8,453 on the working of the year. The whole of these companies are at present striving after greater economies, particularly in the form of their retorts, and, no doubt, they are now all rather more efficiently equipped in this respect than they were at the beginning of the year. The Hermand Oil Company, for some years closed because unable to produce except at a loss, are at present shaping for restarting, induced thereto by the improved condition of the products market. The directors need some fresh working capital, and if the present prospect holds, they will probably get the needful amongst their own shareholders. The Caledonian Company has been kept going under a rather severe pressure of financial difficulties, but it has now a chance of pulling through, that is to say, if prices are destined to be maintained. The directors of the Clippens Company are in a sore stress peculiar to themselves, in consequence of protracted litigation with the Edinburgh and District Water Trustees relative to the working of their minerals. Compensation will be coming to them, and if sufficient in amount, and fair markets are vouchsafed, they also may pull through. All the companies have had some trouble with their shale miners about wages; but, after the market had improved a little, a rise was conceded, and it is to be hoped that the men will rest contented with that, until their employers are enabled to work themselves into something like safety. They are still a long way off that desirable haven.

Trade Notes.

Proposed Steel Works on the Tees.—It has long been known that the almost inexhaustible supply of Cleveland iron ores has not hitherto been available, except in a limited degree, for the basic process of steel-making, and millions of tons of Spanish hematite ore are imported. Messrs. Bell Brothers, Limited, some time back carried on experiments by the "Saniter" process at Port Clarence, near Middlesbrough, which have subsequently been continued at the same works by Messrs, Dorman, Long and Co., with the result that 2,000 tons of high-class steel have been produced from Cleveland iron by the new process, in open hearth furnaces. The steel is stated to be fit for ship-plates and other purposes. The results, it is averred, are entirely satisfactory both as to quality and cost of production, so much so that Messrs Dorman and Co. are prepared to advance half of £300,000. required for new steelworks on this system. The announcement is hailed as one of the greatest value, and will create quite a revolution in metallurgy.

Irish Fish Oil and Guano Syndicate Ltd.—A general meeting of the Irish Fish Oil and Guano Syndicate was recently held in Dublin. The floating factory Shamrock and other working plant had been handed over to the Irish Fisheries Development Syndicate, Limited, whose option of purchase expires on the 20th January, 1899. The reports of the officials of the latter Syndicate stated that since the Shamrock had been at Valentia the fishing had not yielded very much raw material, and during the last four months only 23 tons had been collected; but the machinery on board fully carried out what could be done if only sufficient raw material was available, its capacity being about 100 tons of raw material weekly. Local farmers who had purchased and used the fish guano made on the Shamrock were very well satisfied, and said that it had increased their crops considerably, and they would be willing next season to buy largely. An agreement was ratified by the shareholders whereby the Shamrock was to be handed back to the vendors, and the purchasing Syndicate granted an extension of time for the option. It was stated that the proposed new company would not be brought out for three or four months.

THE SULPHIDE CORPORATION.—The Earl of Kintore presided over the extraordinary general meeting of the Sulphide Corporation last week at Winchester House, London. The Chairman submitted for confirmation the resolution passed at the ordinary general meeting held in December, reducing the capital of the company from £1,100,000. to £962,500, divided into 550,000. preference shares of £1., and 500,000 ordinary shares of 15s. each. The Hon. Henry Gibbs seconded, and the resolution was unanimously carried. Mr. Bayliss asked if the garbled report of the last meeting was issued by the order of the board. He protested that it was a most misleading and inaccurate report. The Chairman, however, ruled him out of order, and Mr. Bayliss entered a protest, saying that he would raise the question at the next meeting. The meeting was then adjourned with a vote of thanks to the chairman.

THE TASMANIAN COPPER COMPANY, LIMITED.—The directors, in their report for the twelve months ending the 31st December, 1897, say that the general manager, Mr. Wilson, estimates that there is now blocked out 400,000 tons of ore, with practically an unlimited further quantity under foot and laterally; the ore body being very massive, and the lode large and strong. In the light of the fuller knowledge of the character of the ore gained by the development of the mine, the question of treatment requires reconsideration in consequence of the reduced copper and increased zinc contents. It is now evident that every effort must be made to decide upon a process that will save the zinc and lead; therefore, acting under the advice of Messrs. Wilson and Henrie, the board have determined to postpone the erection of pyritic furnaces until they have completed their inquiries and efforts to find a process that will effect a profitable saving of the zinc and lead contents in addition to the other metals. If not successful in these efforts, it will be time enough to return to the plan of pyritic smelting.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols nominally remain at 9d. for 90's and 50/90's, but prices vary according to locality. There is nothing fresh to report concerning carbolic acids or naphthas, all of which remain *in statu quo ante*. Creosote maintains its position and the forward market is active. Pitch is steady, and makers are firm at 24s. 6d f.o.b. East Coast, and 22s. West Coast.

Sulphate of ammonia is firm and there is a fair business doing. The forward market gives promise of further activity at £10. 5s. Prices for prompt are also inclined to be dearer, closing values being:—London outside makes, £10. 3s. 9d.; Liverpool, £10 5s; Hull, £10. 2s 6d.; and Leith, £10. 2s. 6d. to £10. 3s. 9d. Nitrate steady.

MISCELLANEOUS CHEMICAL MARKET.

Business continues brisk in the leading products of the alkali trade. There is generally more inquiry for prompt and forward delivery, but the supply being equal to all demands, there is no material change in prices. Bleaching powder is, however, rather firmer, and now quoted £4. 15s. for prompt delivery, and £4. 5s. for forward contracts f.o.r. makers' works. Hardwoods, f.o.b., £5 to £5. 5s. per ton. In caustic soda the quotations for spot delivery are unchanged, viz., f.o.b. Liverpool, 77 % £7. 12s. 6d, 74 % £7. 7s. 6d., 70 % £6. 17s. 6d., 60 % £5. 17s. 6d. per ton. Ammonia alkali is firm at £4. 2s. 6d., bags, f.o.r.; forward contracts being done at 5s. per ton less. Soda crystals and bicarbonate are unchanged. Salt cake is dearer at 27s. 6d. to 30s. in bulk, f.o.r. Chlorates are steady; potash at 3⅝d. and soda at 3¼d. per lb. Sulphur firm at £4. 12s. 6d. bulk, f.o.r. Sulphate of Copper firm at £18. 15s. to £19., f.o.b. Potash, caustic and carbonate, are in fairly active demand, and prices are maintained. Prussiates of potash and soda are dearer, and makers are fully engaged for some time. In white powdered arsenic there is more activity, and for best brands prices rule from £16. 5s. to £16. 10s. f.o.r. Garston, London, etc. Brown acetate of lime is firm at £5. 10s. Manchester district, and £5. 5s. to £5. 7s. 6d. c.i.f. U.K. ports. Grey £7. to £7. 5s. c.i.f. Aniline oil and salt are lower at 4¾d. and 4¼d. per lb. respectively. Carbolic acids in fair demand, and prices are steady. Permanganate of potash rather lower. Nitrate of soda firm at 7s. 6d., and with better prospects for improved price on forward shipments. Lead salts are quiet and values unaltered.

THE METAL MARKETS.

LONDON, WEDNESDAY.—Pig iron firm: Scotch warrants closed at 49s. 11d.; Middlesbrough, 44s. 9d. cash; and hematite, 57s. 10d. Copper steady: Chili bars, G. O. B.'s and G. M. B.'s, closed at £58. 1s. 3d. to £58. 6s. 3d. cash, and £58. 8s. 9d. to £58. 13s. 9d. three months. Tin easier: Straits closed at £88. 5s. 0d. to £88. 15s. 0d. cash, and £89. 2s. 6d. to £89. 12s. 6d. three months; Australian, £89. 2s. 6d.; English ingots, £92. Lead firmer: Spanish, £13. 2s. 6d. to £13. 5s. English, £13. 7s. 6d.; Silesian spelter, ordinary, £24. 5s. to £24. 6s. 3d. Nickel, 1s. 2½d. Antimony, £36. 15s. Quicksilver: First hands, £7. 15s.; second hands, no quotation. *Copper shares* steady: Cape, 5 to 5⅛; Copiapo, 2⅝ to 2¾; Libiola, 1⅞ to 2⅛; Mason and Barry, 3⅛ to 3¼; Rio Tinto, 32⅜ to 32½; Tharsis, 7 5/16 to 7 7/16.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

OILS.—Palm oil is steady, with Lagos at £20. 15s. and Congo £18. 7s 6d. Olive is firm, and prices favour sellers at £30. for Malaga, and £29. 10s. to £30. for fine Seville. Linseed is dearer at 17s. 9d. to 18s. 6d per cwt. for Liverpool makes in export casks. Cottonseed firm, with Liverpool refined at 15s. 3d. to 15s. 9d. per cwt. Castor oil steady. There are sellers of good seconds Calcutta at 2 3/8d. ex quay and 2⅞d. store, while first pressure French has been sold at 2 3/8d. per lb., store. Tallow is in good demand, and firmly held for full prices. Resin steady and unchanged. Spirits of turpentine firm, with sellers at 33s. 3d. per cwt. Petroleum is moving satisfactorily, with American at 6⅝d. to 8d., and Russian refined 6d. per gallon.

CAKES.—There is a firmer tone ruling in the market for all imported descriptions of linseed, and an advance of fully 2s. 6d. has been established for spot parcels of new choice Western, the quotation being now £6. 16s. 3d. to £7., all the choice quality having been cleared at £7. 5s. Bombay £7. to £7 5s. River Plate still offer at £7. 2s. 6d., and Russian at £7. 10s. per ton, net cash. There is rather more inquiry for the latter qualities. Liverpool makes have ruled rather quiet, but sellers remain quite steady, and previous quotations are maintained at £7. 17s. 6d. to £8. 15s per ton, according to brand. A slightly steadier tone rules in the market for good to choice brands of American decorticated cottonseed, and the value is now £5. 16s 3d. to £6, according to quality, and Liverpool makes £6. 10s. to £6. 15s. per ton, with a good trade passing. Undecorticated Liverpool makes meet a good consumptive demand at £4. 7s. 6d. to £5, according to brand, and prime quality Egyptian on the spot are also very well held for £4. 7s. 6d. per ton in first hands.

COLOURS.—Prices are steady, and practically without change. Ochres: Oxfordshire—common £10., medium £12, best £15.; Derbyshire—common 40s., medium 50s., best 60s.; Welsh—best 9 s.; seconds, 50s., and common, 18s.; Devonshire, 40s. to 45s.; French, J.C., 65s. Umber: 40s. to 45s. White lead: £16. Red lead unchanged. Venetian red: £6. to £10. Cobalt: Prepared oxide, 9s 9d; black, 9s.; blue, 6s. Oxide of iron: Common, £7.; medium, £10.; finest, £20. Zinc oxide: £22. 10s. to £25.;

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—The markets after holidays open very fair, linseed oil in particular being very firm. The stocks of seed held in Hull month ending December were linseed, 19,890 qrs, against November, 11,208 qrs.; rapeseed, 12,334 qrs. against 11,448 qrs.; cottonseed, 880 tons against 460 tons; while the imports during the month have been linseed, 86,745 qrs. against 131,304 qrs. during November; rapeseed, 12,751 qrs. against 32,027 qrs.; cottonseed, 34,725 tons against 26,829 tons. The quotations for oil are:—Linseed very firm, 15s. 7½d. spot naked, and 15s. 9d. to August; boiled and refined, £1. to £1. 10s. per ton extra. Refined cotton oil 12s. 6d. spot, 12s. 9d to April and 13s. 3d. May to August; filtered qualities about £1. to £1. 5s. extra. Ordinary casks, £1., and barrels £1. 10s. per ton extra. Castor oil, extracted here, pure pharmaceutical, cold drawn, 29s. per cwt. in barrels, 3¼d. per lb. in cases; first pressure 27s., in barrels; second pressure, 26s in barrels. Oleines quiet, £17. to £19. per ton. Turpentine 34s. in barrels. Olive oil in fair demand, price unaltered. Olive oil soap, £16. to £18. per ton. Resins firm and unchanged. Cod oil quiet, £16. to £18 per ton.

CAKES.—The report of this market for the year is as follows:—Linseed cakes: The demand has been limited by a smaller supply of seed than last year, which has been very nearly crushed up as the stocks show. Prices have stood at a higher average than any year since 1893, when the lowest summer price was £8. The fluctuations in price have been insignificant. In 1897 the market opened at £6. and closed at £7. 17s. 6d. Last year it opened at £7. 15s. and closed nearly £8. The deficiency in the make of linseed cakes has been largely made up by the supply of compound feeding cakes and foreign made cakes, the demand for which will most likely be curtailed when linseed becomes cheaper. The minimum price of the year has been £6. 17s. 6d for 95 % pure in July, and the maximum £8. 7s. 6d. in March. The present prices are, 95 %, £8. to £8. 2s. 6d. Oilcakes (linseed), £7.; Russians, £7. 10s. to £7. 12s. 6d. Cotton cakes: The

supply of seed has been about equal to last year, being something like double the supply of linseed. Prices have varied little, the year opening about £4. and closing at £4. 7s. 6d.; the minimum price being in August £3. 16s. 3d., and the maximum during May of £4. 10s. The present prices are, best makes, £4. 10s. to £4. 12s. 6d.; seconds, £4 6s. 3d. to £4. 8s. 9d.; decorticated, £6. 5s. to £6. 7s. 6d. Rape cakes in small supply, the price for Black Sea averaged £4. to £4. 2s. 6d., at which they are at present being quoted; East India, £5. 10s. The bulk of the rape oil is being extracted by the solvent process by the extracting companies, of which there are two, both doing well, and we are promised another shortly.

PAINTS.—Unchanged; business quiet.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, Wednesday.

Almost the only feature of any note in this corner of the market is the marked improvement discernible in sulphate of ammonia. About the middle of last week the article went into rather urgent demand, and values rose at a rate much brisker than has been the case for a long time. The New Year holidays have intervened since, and market indications are, consequently, not yet very clearly shown; but unless the call has died away as suddenly as it arose the value on full reopening of business should be £10. 5s. to £10. 7s. 6d. for prompt f.o.b. Leith. Ordinary chemicals are very quiet, with the tendency downward if anything; but sulphate of copper still holds to the firm side. Mineral oils and paraffins are generally healthy, burning oils particularly being in very large deliveries. Prices in this department are all pretty firm at late quotations.

Chief prices current are:—Soda crystals, £2. 7s. 6d. to £2. 12s. 6d. nett, Tyne; soda ash, £4. 2s. 6d. to £4. 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 7s. 6d. to £5. nett, Glasgow; caustic soda, white, 74° £7. 7s. 6d., 70/72° £6. 17s 6d., 60/62° £6., and cream 60/62° £6., all nett, Liverpool; bleaching powder, 35/37°, £5. 0s. nett, Tyne; saltcake, 26s. 0d.; borax, English refined, £16., and boracic acid, £26. nett, Glasgow; bicarbonate of soda, 5-cwt casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s. nett, Liverpool; bichromate of potash, 3½d., less 3½% for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d., less 3½% for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow); chlorate of potash, 3½d., less 5% Liverpool; nitrate of soda, 7s. 6d. to 7s. 9d.; sulphate of ammonia, £10. 5s. to £10. 7s. 6d. prompt f.o.b. Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £18. 5s. 0d. to £18. 10s. 0d. less 5% Liverpool; paraffin scale, hard, 1⅝d. to 1¾d. per lb., and soft 1¾d. per lb.; paraffin wax, 120° semi-refined, 2d. to 2¼d. per lb.; paraffin spirit (naphtha), 7½d. to 8d. per gal; paraffin oil (burning), No. 1, 6½d.; and crystal, 7d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 15s. to £5. 5s., 885° £5. 10s. to £6., and 890/895° £6. 5s. to £6. 10s. Week's imports of sugar at Greenock were 9,500 bags beet unrefined, and 39 puncheons, 136 barrels, and 2,911 bags cane unrefined.

TYNE CHEMICAL REPORT.

Tuesday.

Chemicals are very quiet and the year 1898 finished with a dull market and prices weak. Soda crystals are steady at £2. 12s. 6d. per ton, gross weight, locally. Caustic soda, 70% £7., and 76/77% £8. per ton. Bleach rather firmer at £4. 15s. to £5. per ton. Sulphur scarce at £4. 15s. per ton.

Bleaching powder, softs, £5. 0s. per ton, nett; do. hards, £5. 5s. per ton, nett; caustic soda, 76/77% £8. and 70% £7. 0s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. 0d. per ton, nett; blanc fixe, £6. 10s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett: aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt is firm at 9s. 6d. per ton, f.o.b. Tees.

COALS.—Trade continues very steady with a good demand for steam and bunker coals, and the majority of collieries in Northumberland and Durham are working full time. Coke is also very firm and in excellent consumption locally. To-day's prices:—Best Northumbrian steam, 9s. 3d. to 9s. 6d. per ton; second qualities, 8s. 3d. to 8s. 6d. per ton; small steam, 4s. 6d. to 5s. 0d. per ton; gas coals, 10s. to 11s. per ton; bunker coals, 8s. to 8s. 6d. per ton; household coals, 10s. to 11s. per ton; coke 18s. to 20s. per ton.

IMPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.

Week ending December 24th.

Acetate of Lime—
U. States, 755 bgs. H. Wallace & Co.

Acetic Acid—
Holland, 5 pks. A. & M. Zimmermann
Germany, 19 Phillips & Graves

Acetone—
Austria, 15 dms. Thames S. T. & L. Co., Ld.
" 31 D. T. Domeier & Co.

Acids—
Holland, 58 pks. Little & Johnston

Alkali—
France, 50 c. J. Barber & Co.
U. States, 65 "

Ammonia—
Holland, £40 H. Lorenz

Ammonium Bromide—
Germany, £75 R. W. Greeff & Co.

Ammonium Chloride—
Holland, £38 14 cks. H. Lorenz

Antimony Ore—
Straits, 30 t. H. Grey, Junr.

Asbestos—
Italy, £66 Girard Frères & Co.
" 445 Bender & Martiny
" 85 London Asbestos Co.
" 335 Pickford & Co.
Germany, 70 Craven & Co.

Barium Chloride—
Holland, £35 Petri Bros.

Barytes—
France, 2 pks. Burnett Brs. & Sons
Germany, 16 Steinhoff, Sons & Co.
Holland, 44 P. Jantzen
" 91 Taylor Brs.
Germany, 19 P. Jantzen
" 150 R. W. Greeff & Co.
Belgium, 250 Capes & Self
" 36 J. L. Lyon & Co.
" 134 W. Harrison & Co.
" 31 O'Hara & Hoar
Holland, 47 Blundell, Spence & Co.
" 197 W. Harrison & Co.

Bleaching Powder—
France, 54 cks. J. M. Steel & Co.

Bone Meal—
E. Indies, 100 t. A. Hunter & Co.

Bones—
Germany, 98 t. E. Groschke

Boracic Acid—
Germany. 70 pks. H. Lorenz

Borax—
Germany, £45 H. Lorenz

Bromine—
Germany, 40 pks. A. & M. Zimmermann

Caoutchouc—
Germany, 13 c. Wallace Brs.
" 9 Major & Field
P. W. Africa, 4 Anderson, Weber & Smith
Zanzibar, 47 Hale & Son
P. E. Africa, 2 Clarke & Smith
Straits, 130 E. Boustead & Co.
" 78 W. Pope & Co.
B. Honduras, 9 Jackson & Till
Germany, 66 L. & I. D. Jt. Co.
Straits, 480 Jewesbury & Co.
B. Guiana, 128 N. Waterhouse & Sons
Zanzibar, 70 L. & I. D. Jt. Co.
B. Honduras, 1 Major & Field
Ecuador, 150 Prop. Bull Wf.
Germany, 38 F. Huth & Co.
Zanzibar, 2 Drolenvaux & Bremner
B. W. I., 3 S. Figgis & Co.
U. States, 14 Lewis & Peat
Madagascar, 14 "
Holland, 169 Hicks, Nash, & Co.

Carbolic Acid—
Germany, 50 pks. Blagden, Waugh & Co.
" 40 L. & I. D. Jt. Co.

Castor Oil—
Italy, 10 cs. Hodgkinsons & Co.
" 5 brls. A. Laming & Co.
France, 35 pks. F. Bochin
" 28 brls. Mordaunt Bros.
" 60 Lucas & Spencer's Wf., Ld.
E. Indies, 58 Cayzer, Irvine & Co.
" 25 Lichfield & Co.

Caustic Potash—
France, 40 dms. Petri Brs.
" 8 Thames S. T. & L. Co., Ld.
Germany, 3 cs. Vinolia Co., Ld.

Chemicals (*otherwise undescribed*)**,**
Holland, £5 H. Lorenz
" 269 T. H. Lee
Belgium, 44 John Cockerill Line
U. States, 420 B. & F. Wf. Co., Ld.
Germany, 1,011 L. & I. D. Jt. Co.
" 403 A. & M. Zimmermann
" 117 H. Lambert
Belgium, 1,065 T. H. Lee
Holland, 10 M. Benscher
" 6 J. Barber & Co.
France, 9 Mory & Co.
Germany, 22 Phillipps & Graves

Cream of Tartar—
France, 30 pks W. C. Bacon & Co.
" 5 M. Ashby, Ld.
Holland, 70 Kirkpatrick, Barr & Co.
France, 3 C. Atkins & Nisbet
" 2 W. Balchin, Ld.
" 20 B. & F. Wf. Co., Ld.
Spain, 5 "

Dyestuffs—
Cochineal
Canaries, 5 pks. L. & I. D. Jt. Co.
" 8 Hendrey & Martin
Extracts
France, 50 pks. L. J. Levenstein & Sons
Canada, 165 Boutcher, Mortimore & Co.
France, 60 B. & F. Wf. Co., Ld.
" 35 T. Tropp & Sons
Gambier
Straits, 951 pks. Hoare, Wilson & Co.
" 227 Union L. Co., Ld.
" 110 W. France & Co., Ld.
Indigo
Holland, 3 cs. J. Barber & Co.
E. Indies, 7 chts. Arbuthnot, Latham & Co.
" 7 R. Von Glehn & Sons
Logwood
B. H'duras, 394 t. Everingham & Co.
Myrabolams
E. Indies, 3,412 pks. W. Shelcott & Sons
" 680 J. E. Scott
" 1,240 D. Sassoon & Co.
Saffron
Spain, 2 pks. J. Owen
" 4 J. Barber & Co.
" 1 Hodgkinsons & Co.
" 1 R. Quincey & Son
" 2 Richardson, Spence & Co.
Shumac
Spain, 63 pks. J. Owen
Italy, 68 R. Waters
Tanners' Bark
Natal, 20 t. T. Rennie, Son & Co.
" 42 A. & W. Nesbitt

Farina—
Holland, 100 pks. G. Hornzee
Germany, 50 M. Dk. Co.
France, 3 Lon. & Til. Ltge. C. & D. Co.

Flake White—
Germany, 10 pks. Herrmann & Co.

Glucose—
U. States, 2,700 pks. 2,700 c. C. Barnard
" 22,190 26,040 R. G. Hall & Co.
" 2,000 2,000 Pearce, Pelly, & Co.
" 1,000 1,000 Pickford & Co.
" 1,000 1,000 Thompson & Co.
" 50 —— E. & T. Pink
" 1,500 1,500 L. & I. D. Jt. Co.
" 500 500 Bellamy's Wf., Ld.
" 500 500 Ohlenschlager Brs.
" 500 500 Fellows, Morton, & Co.
" 100 100 C. S. Lovell
" 500 500 Norman & Co., Ld.
France, 300 300 W. E. Cole
Germany, 28 80 M. Dk. Co.

Glue—
France, £46 Mory & Co.
" 9 Flageollet & Co.
Belgium, 19 T. Ronaldson & Co.
" 300 J. Barber & Co.
" 110 J. E. Kitton
" 885 T. M. Duche & Sons
Austria, 500 Steinhoff, Sons, & Co.
Germany, 177 L. & I. D. Jt. Co.
" 12 M. Dk. Co.
Holland, 10 J. Barber & Co.
" 84 A. E. Piggott
" 83 Herrmann Keller, & Co.
U. States, 50 Ldn. Parcels Del. Co.
" 70 Parsons, Fletcher, & Co.
" 60 Taylor Brs.

Glue Stock—
Germany, 47 pks. Elkan & Co.
" 8 sks. Hicks, Nash, & Co.
55 bls.
Holland, 49 "

Glycerine—
Germany, £280 R. W. Greeff & Co.
France, 300 H. Hill & Sons

Kainit—
Germany, 50 t. F. W. Berk & Co., Ld.

Litharge—
Germany, 6 pks. Butler's Wf., Ld.
" 8 H. Lambert
" 45 Spies Brs. & Co.
Holland, 15 J. Owen

Lithopone—
Holland, 40 pks. A. Zumbeck & Co.
Germany, 107 Spies Brs & Co.

Manganese Ore—
N. Zealand, 7 t. L. & I. D. Jt. Co.
E. Indies, 16 Soundy & Sons

Methyl Alcohol—
Belgium, 10 dms. E. Catlin
France, 10 Lister & Biggs
Germany, 34 W. Izzard

Molasses—
U. States, 250 cks. 1,500 c. J. Forsey
" 63 brls. 380 R. G. Hall & Co.

Ochre—
France, 30 pks. Ellam, Jones, & Co., Ld.
" 98 W. Harrison & Co.
" 39 Burnett Brs & Sons
Spain, 100 J. L. Lyon & Co.
Holland, 24 Phillipps & Graves

Paraffin Wax—
U. States, 300 cs. Anglo-American Oil Co.
" 400 brls. H. Hill & Sons

Phosphate of Lime—
Belgium, 40 t. C. A. & H. Nichols
" 200 J. E. Kitton
U. States, 110 Lawes Chemical Manure Co.

Pitch—
N. Russia, 560 brls. Fellows, Morton, & Co., Ld.
U. States, 34 cks. F. Gardner

Plumbago—
Germany, 25 cks. B. Gallaway
" 150 cs. E. & T. Pink
Ceylon, 210 brls. G. R. Haller & Co.
" 50 Cayzer, Irvine, & Co.

Potassium Bromide—
Germany, £90 R. W. Greeff & Co.

Potassium Carbonate—
France, 45 c. Petri Brs.
Germany, 260 "
" 150 H. Lambert
" 1,400 J. M. Steel & Co.
Belgium, 1 Sawer, Sons, & Co

Potassium Chlorate—
France, 420 cks. Union Ltge. Co., Ld.

Potassium Oxychloride—
Sweden, 26 kgs. G. Boor & Co.

Potassium Permanganate—
Germany, 40 kgs. R. W. Greeff & Co.

Potassium Sulphate—
Germany, 500 bgs. Anglo-Contl. Guano Works
" 50 F. W. Berk & Co., Ld.

Pyrites—
Spain, 1,468 t. Anderson, Anderson, & Co.

Saltpetre—
Germany, 30 cs. R. W. Greeff & Co.
" 50 cks P. Hecker & Co.
" 34 J. Hall & Son, Ld.
" 100 bgs. C. Wimble & Co.
E. Indies, 1,159 Lucas & Spencer's Wf.
B W.I., 364 "
——, 85 J. Greig

Soda—
Holland, 100 c. R. W. Greeff & Co.
U. States, 5 L. & I. D. Jt. Co.

Sodium Acetate—
France, 89 cks. Burnett Brs. & Sons

Sodium Bichromate—
Germany, 30 cks. A. E. Neale

Sodium Hyposulphite—
Holland, 100 cks. J. Owen

Sodium Prussiate—
Belgium, 18 cks. Blagden, Waugh, & Co.

Sodium Sulphate—
Holland, 25 cks. H. Lorenz

Starch—
U. States, 175 pks. Beck & Pollitzer
" 100 C. Tennant, Sons, & Co.
" 4,650 R. G. Hall & Co.
" 1,056 Ohlenschlager Brs.
Holland, 95 Phillipps & Graves
Austria, 55 C. Tennant, Sons, & Co.
Belgium, 430 Cubitt & Walker
" 120 F. Claydon & Co.
" 126 T. H. Lee
" 72 Leach & Co.
" 200 Seaward Brs., Ld.

Stearine—
Holland, 15 cks. Robinson & Co.
" 15 W. Von Romberg
" 136 bgs. H. Hill & Sons
" 86 Becker & Wagner
Belgium, 6 cks. T. Ronaldson & Co.
" 7 H. Hill & Sons
" 63 bgs. "
U. States, 40 cks. L. & I. D. Jt. Co.

Sulphur—
Italy, 2 t. Soundy & Sons
" 5 W. Slimmon

Sulphuric Acid—
Holland, 6 pks. H. Lorenz

Talc—
Italy, £28 Lindley & Co.

Tannic Acid—
Germany, 5 pks. R. W. Greeff & Co.

Tar—
Russia, 46 brls. F. & S. Chiesman

Tartar—
Italy, 16 pks. Howards & Son

Tartaric Acid—
Holland, 12 pks. F. C. Devon & Co.
France, 1 Burnett Brs. & Sons

Ultramarine—
Holland, 9 pks. J. Barber & Co.

Verdigris—
France, 3 pks. C. F. Gerhardt

White Lead—
Belgium, 19 pks. J. L. Lyon & Co.
" 75 T. & W. Farmiloe, Ld.
Holland, 53 Randall Brs.
" 21 Perkins & Homer
" 20 A. & M. Zimmerman

Wood Pulp—
France, 68 pks. W. D. Cork
" 300 Christophersen & Co.
" 500 Tough & Henderson
Holland, 91 Robinson, Roberts, & Co.
" 130 E. J. & W. Goldsmith
Sweden, 225 Tough & Henderson
U. States, 1,193 Henderson, Craig, & Co.
Norway, 400 W. E. Bott & Co.
" 625 Johnsen & Jorgensen
" 5,031 London Paper Mills Co.
Denmark, 200 Johnsen & Jorgensen
Portugal, 500 E. J. & W. Goldsmith
Holland, 139 bls. W. H. Carey & Sons

Zinc Oxide—
U. States, 300 pks. M. Ashby, Ld.
" 185 Elkan & Co.
Germany, 45 R. W. Greeff & Co.
" 500 Soundy & Sons
Holland, 20 R. W. Greeff & Co.
" 101 M. Ashby, Ld.
" 50 J. Matton

LIVERPOOL.

Week ending December 22nd.

Aluminium—
New York, 500 bxs. T. Ashbury

Ammonia—
Antwerp 50 dms

Ammonium Nitrate—
Antwerp, 68 brls.

Barytes—
Antwerp, 110 cks. 105 bgs

Benzine—
New York, 1,000 brls.

Bleaching Powder—
Antwerp, 50 cks.

Bone Ash—
B. Ayres 955 bgs. W. B. Dickinson

Bones—
Alexandria, 560 bgs.

Castor Oil—
Marseilles, 36 cs. Langstaff & Co.
" 11 cks, J. J. Mack & Sons
" 260 39 cs.
Calcutta, 908 Ralli Bros.
" 146

Chalk—
Rouen, 13 cs. Co.-op. W'sale Society, Ld.

Cobalt Carbonate—
Rouen, 1 cs. R. J. Francis & Co.

Colours—
Antwerp, 3 cks. 8 brls.
Rotterdam, 169

Cottonseed Oil—
Galveston, 500 brls. Phiggers & Co.
New York, 125 Elder, Dempster & Co.

Cream of Tartar—
Bordeaux, 121 cks.
B. Ayres, 24 kgs. 1 jar

Dried Blood—
Zarate, 532 bgs. J. Nelson & Sons

Dyestuffs—
Annatto
Bordeaux, 15 cks.
Cutch
Marseilles, 45 cs.
Singapore, 1,900 bxs.
Dunkirk, 10 pks.
Divi Divi
Hamburg, 100 bgs.
Extracts
New York, 150 brls. McArthur & Co.
Gambier
Singapore, 456 bgs.
Shumac
Marseilles, 3 bls. A. S. Morris & Co.
" 10 Evans, Sons & Co.
Valonia
Syra, 180 bgs.

Dyestuffs *(otherwise unaescribed)*
Philadelphia, 100 bxs. 90 brls.

Gelatine—
Hamburg, 7 cs.

Glucose—
St. John, N.B., 500 brls.
N'port News, 580

Glue—
Fiume, 4 cks.

Limestone—
Antwerp, 4 crts. J. T. Fletcher & Co.
Nantes, 2 R. J. Francis & Co
Antwerp, 2

Manganese Ore—
Tjilatjap, 590 t.

Manure—
Amsterdam, 900 bgs.

Mineral White—
Fiume, 300 bgs.

Molasses—
N. Orleans, 1,000 brls.

Naphtha—
New York, 5,613 brls.

Ochre—
Rouen, 19 cks. Co-op. W'sale Society, Ld.

Paint—
M. Video, 6 cks. J. T. Nickel & Co.

Paraffin Scale—
Rangoon, 790 bxs. 80 bgs.
Baltimore, 100 brls.

Phosphate Rock—
Pensacola, 1,000 sks.

Phosphates—
Antwerp, 4 cks.
Bona, 1,600 t.

Pitch—
Marseilles, 90 cks.

Potash—
Dunkirk, 1 ck. 24 dms.

Pyrites—
Huelva, 7,850 t. Matheson & Co.

Saltpetre—
Hamburg, 2 brls.

Soap—
New York, 2 cs.
Naples 311
Antwerp, 143
Marseilles, 178

Soap Lye
Marseilles, 40 dms.

Sodium Bichromate—
Rouen, 14 cks. R. J. Francis & Co.

Starch—
Boston, 1,300 bgs.
Antwerp, 80 cs. J. T. Fletcher & Co.
" 662
Odessa, 200 bgs.
Hamburg, 10 cks.

Stearine—
Antwerp 21 bgs. 1 bx.

Tallow—
Philadelphia, 250 tcs.
N'port News, 400
Boston, 225 J. Mackie & Co.
B. Ayres, 305 cks.
Zarate, 234 pps. J. Nelson & Sons, Ld.

Tartaric Acid—
Hamburg, 2 cks.

Varnish—
New York, 25 brls. 1 cs. W. A. Warren

Wood Pulp—
Gothenburg, 7 bls. G F. Green & Co.
" 120
Rotterdam, 66 pks
Kallero, 3,350 Andrews & Co.

Zinc Ashes—
Philadelphia, 86 brls.

Zinc Oxide—
New York, 230 brls.
Antwerp, 65
Hamburg, 5 cks.

MANCHESTER.

Week ending December 24th.

Acetate of Lime—
New York, 2,897 bgs.
Rouen, 154

Alizarine—
Rotterdam, 33 cks.

Aniline Salts—
Rotterdam, 23 cks.

Antimony Salts—
Rotterdam, 15 cks.

Barytes—
Antwerp, 203 bgs.

Boracic Acid—
Hamburg, 6 cks.
Chalk—
Rouen, 3 cs.
Colours—
Antwerp, 3 brls.
Rotterdam, 25 bgs. 14 5 kgs. 78 cks. 34 cs.
Cream of Tartar—
Rotterdam, 2 cks.
Dyestuffs *(otherwise undescribed)*
Newport News, 250 sks.
Extracts—
New York, 20 bxs. 82 brls.
Rouen, 20 cks 10 cs.
Farina—
Hamburg, 1,040 bgs.
Rotterdam, 300 N. W. Jackson
,, 800
Fustic—
Corinto, 375 t. Mucklow & Co.
Gelatine—
Rouen, 3 cs.
Glucose—
Newport News, 1,300 brls.
New York 450
Glue—
Rouen, 77 cks. 60 cs. 5 bgs. 61 bls.
Indigo—
Rotterdam, 3 chts.
Limestone—
Antwerp, 3 crts. 2 cs.
Nitro-benzol—
Rotterdam, 2 tins
Ochre—
Rouen, 29 cks.
Oxalic Acid—
Rotterdam. 45 cks.
Paraffin Scale—
New York. 1,043 brls.
Paranitro-benzol—
Rotterdam, 2 cs.
Potash—
Hamburg, 64 cks.
Pumice Stone—
Rotterdam. 40 cs.
Sodium Phosphate—
Antwerp, 6 cks.
Starch—
Antwerp, 572 cs.
Hamburg, 50 cks. 156
Newport News, 400 bgs. 3 542 sks.
New York, 200
Rotterdam, 175
Stearine—
Antwerp, 12 bgs.
Rotterdam, 13 bls.
Stearine Pitch—
Hamburg, 29 cks.
Tallow—
Boston, 650 brls.
New York, 50 tcs
Tartaric Acid—
Rotterdam. 37 cks.
Tin Chloride—
Antwerp, 12 cks.
Waste Salt—
Hamburg, qty.
Wood Pulp—
Boston, 49 cs.
Christiania, 70 W. H. Ingram
Frano, 2,100 bls. W. H. Stott & Co.
Gefle, 1,200 ,,
,, 10,212
Gothenburg, 2,834
Hamburg, 430 pks.
Rotterdam, 99 9
Sundswall, 669 W. H. Stott & Co.
Zinc Oxide—
Antwerp, 10 cks. 20 brls.
Rotterdam, 115

HULL.

Week ending December 24th.

Antimony—
Dunkirk, 2 cks. Wilson, Sons, & Co., Ld.
Barytes—
Antwerp, 100 cks H. F. Pudsey
Rotterdam, 106 Hull & Netherlands S. S. Co.
50 bgs.
Borax—
Bremen, 10 cks. Reckitt & Sons
Chemicals *(otherwise unaescribed)*
Antwerp, 62 cks. Wilson, Sons, & Co., Ld.
Ghent, 30 pks. ,,
Rotterdam, 1 ck. Hull & Netherlands S. S. Co.
4 cs.
Stettin, 30 cks. Wilson, Sons, & Co., Ld.
Cinnabar—
Bremen, 2 cs. J. Pyefinch & Co.
Colours—
Amsterdam, 4 cks. Hull & Netherlands S. S. Co.
Antwerp, 13 pks. Wilson, Sons. & Co., Ld.
,, 6 cs.
Bremen, 2 J. Pyefinch & Co.
Ghent, 8 cks. Wilson, Sons, & Co., Ld.
Hamburg, 2
Rotterdam, 16 pks. 46 cks 1 cs. Hull & Netherlands S. S. Co.
Cream of Tartar—
Rotterdam, 2 cks. Hull & Netherlands S. S. Co
Dextrine—
Harlingen, 5 bgs. Hull & Netherlands S. S. Co.
Dyestuffs—
Alizarine
Rotterdam, 13 cks. Hull & Netherlands S. S. Co.
Indigo
Rotterdam, 3 chts. Wilson, Sons, & Co., Ld.
Madder
Rotterdam, 4 cks. Hull & Netherlands S. S. Co.
Farina—
Antwerp, 600 bgs. Wilson, Sons, & Co., Ld.
Hamburg, 130 ,,
Harlingen, 250 Hull & Netherlands S. S. Co.
Stettin, 1,140 Wilson, Sons, & Co., Ld.
Glucose—
New York, 700 brls. 568 bgs.
Stettin, 100 Wilson, 10 cks. Sons, & Co., Ld.
Glue—
Bergen, 3 brls. Wilson, Sons, & Co., Ld.
Christiansund, 2 ,,
Hamburg, 20 bgs.
,, 340 Wilson, Sons & Co., Ld.
Rotterdam, 10 Hull & Netherlands S. S. Co.
Stettin, 1 ck. Wilson, Sons, & Co., Ld
Glue Stock—
Hamburg, 160 bls. Wilson, Sons, & Co., Ld.
Limestone—
Antwerp, 2 crts. Wilson, Sons, & Co., Ld.
Lithopone White—
Amsterdam, 20 cks. Hull & Netherlands S. S. Co.
Ochre—
Amsterdam, 3 cks. Hull & Netherlands S S Co.
Paint—
New York, 2 pks. Wilson, Sons, & Co., Ld.
Paraffin Wax—
Hamburg, 20 bgs. Wilson, Sons, & Co., Ld.
New York, 540 brls. 50 cs.
Phosphates—
Ghent, 160 t.
Pitch—
Copenhagen, 50 brls. Wilson, Sons, & Co., Ld.
Rosin—
Hamburg, 45 brls. Wilson, Sons, & Co., Ld
Saltpetre—
Hamburg, 4 cks.
Soap—
Rotterdam, 2 cs. Hull & Netherlands S. S. Co. Sons, & Co., Ld.
Soda—
Ghent, 100 bgs. Wilson, Sons, & Co., Ld.
Starch—
Antwerp, 84 cs. Bailey & Leetham, Ld.
Ghent, 276 Wilson, Sons, & Co., Ld.
Tallow—
Dunkirk, 146 cks. Wilson, Sons, & Co., Ld.
New York, 145 brls. ,,
,, 6
Harlingen, 1 ck. Hull & Netherlands S. S. Co.
Tar—
Konigsberg, 50 brls. Wilson, Sons, & Co., Ld.
Libau, 5 cks.
Turpentine—
Libau, 103 cks.
Ultramarine—
Bremen, 1 cs. J. Pyefinch & Co.
Varnish—
Antwerp, 5 brls. T. F. Chambers & Co.
Hamburg, 2 dms. Wilson, Sons, & Co., Ld.
Waste Salt—
Hamburg, 1,009 bgs.
White Lead—
Rotterdam, 136 cks. Hull & Netherlands S. S. Co.
Wood Pulp—
Bergen, 92 pks. Wilson, Sons, & Co., Ld.
Christiania, 309 bls. ,,
Drontheim, 380 ,,
Helsingfors, 471
Gothenburg, 1,130 pks. ,,
Malmo, 40 ,,
Stettin, 840 ,,
Zinc Ashes—
Christiania, 22 cs. Wilson, Sons, & Co., Ld.

GLASGOW.

Week ending December 29th.

Acetone—
Hamburg, 10 dms.
Alumina Sulphate—
Rotterdam, 70 bgs. J Rankine
19 cks. & Son
Antimony Fluoride—
Hamburg, 17 cks.
Barium Sulphate—
Antwerp, 550 bgs.
Barytes—
Rotterdam, 45 cks.
Hamburg, 50 bgs.
Bleaching Powder—
Rotterdam, 23 cks.
Boracic Acid—
Leghorn, 9 cks. 10 brls.
Borax—
Hamburg, 20 cks.
Castor Oil—
Antwerp, 205 cks.
Marseilles, 86
Chemicals *(otherwise undescribed)*
Rotterdam, 1 cs.
Amsterdam, 1
Colours—
Rotterdam, 5 cks. 11 brls. 8 bxs. 8 cs.
Hamburg, 10 cks.
Rotterdam, 82 pks J. Rankine & Son
Cream of Tartar—
Genoa, 10 brls.
Dyestuffs—
Alizarine
Rotterdam, 17 cks. 48 brls.
Aniline
Rotterdam, 7 brls.
Hamburg, 19 cks. 3 cs.
Aniline Colours
Hamburg, 20 cks. 1 cs.
Extracts
Antwerp, 2 cks.
Genoa, 32 brls.
Marseilles 50 cks.
Indigo
Rotterdam, 12 brls. J. Rankine & Son
Farina—
Hamburg, 100 bgs.
Glucose—
Philadelphia, 100 brls.
N'port News, 1,000
Glue—
Antwerp, 10 cks.
Rotterdam, 70 bgs.
Infusorial Earth—
Hamburg, 295 bgs.
Manganese Chlorate—
Rotterdam, 4 cks.
Ochre—
Marseilles, 80 cks.
Rotterdam, 2
Painters' Colours—
Antwerp, 8 cks.
Phosphate Rock—
Antwerp, 2,030 bgs.
Plumbago—
Genoa, 160 bgs.
Potash—
Rotterdam, 62 cks. J. Rankine & Son
Potassium Prussiate—
Amsterdam, 8 cks.
Rosin—
Rotterdam. 6 cks. J. Rankine & Son
Saltpetre—
Hamburg, 31 kgs.
Soap—
Genoa, 113 cs.
Sodium Chlorate—
Marseilles, 19 cks.
Starch—
Antwerp, 170 cs.
Philadelphia, 900 bgs.
Stearine—
Philadelphia, 50 tcs.
Amsterdam, 61 bgs.
Christiania, 15 brls.
Tartar Emetic—
Hamburg, 2 cks.
Tin Oxide—
Rotterdam, 3 cks.
Varnish—
Antwerp, 2 cs.
White Lead—
Rotterdam, 50 cks.
,, 28 pks. J. Rankine & Son
Wood Pulp—
Christiania, 4 412 bls.
Drontheim, 630
Drammen, 2,435
Gothenburg, 84 202 rolls 203 pks.
Zinc Ashes—
Genoa, 25 cks.
Zinc Oxide—
Antwerp, 20 cks.
Zinc White—
Rotterdam, 25 pks. J. Rankine & Son

TYNE.

Week ending December 24th.

Acids—
Hamburg, 1 ck. Tyne S. S. Co.
Ammonium Chloride—
Rotterdam, 1 cyldr.
Antimony—
Hamburg, 100 cs. Tyne S. S. Co.
Asbestos—
Hamburg, 4 bls. Tyne
66 bgs. S. S. Co.
Barytes—
Antwerp, 600 bgs. Tyne S. S. Co.
Rotterdam, 91 cks. ,,
Colours—
Antwerp, 2 cks. Tyne S. S. Co.
Hamburg, 2 ,,
Farina—
Hamburg, 50 bgs. Tyne S. S. Co.
Glucose—
New York, 150 brls. Furness, Withy, & Co.
Limestone—
Antwerp, 6 cs. Tyne S. S. Co.
Ochre—
Rouen, 194 cks. W. Young & Co.
Saltpetre—
Hamburg, 19 cks. Tyne S. S. Co
Starch—
Antwerp, 200 cs. Tyne S. S. Co.
Stearine—
Antwerp, 13 bgs. Tyne S. S. Co.

White Lead—
Antwerp, 20 cks. Tyne S. S. Co.
Wood Pulp—
Christiania, 480 bls.
Gothenburg, 29 pks.
Zinc Oxide—
Antwerp, 10 brls. Tyne S. S. Co.

GOOLE.

Week ending December 21st.

Acetic Acid—
Rotterdam, 2 cs.
Alizarine—
Rotterdam, 209 cks. 8 cs.
Alkali—
Calais, 10 cks.
Aniline—
Hamburg, 5 cks. 1 cs.
Rotterdam, 35 2
Antimony—
Boulogne, 2 cs.
Caoutchouc—
Boulogne, 6 cks.
Chemicals (*otherwise undescribed*)
Hamburg, 1 ck. 5 cs.
Colours—
Hamburg, 30 cks. 19 cs.
Dyestuffs (*otherwise undes.*)—
Antwerp, 849 bgs.
Amsterdam, 2 cks. 2 cs.
Boulogne, 139 pks.
Rotterdam, 71 44
Farina—
Hamburg, 600 bgs.
Glucose—
Calais, 100 bgs.
Glue—
Antwerp, 10 cks. 6 bs.
Boulogne, 14 pks.
Rotterdam, 1 bg.
Lead Acetate—
Hamburg, 15 cks.
Ochre—
Calais, 36 cks.
Potash—
Calais, 29 dms.
Hamburg, { 4 cks. / 20 bgs.
Saltpetre—
Antwerp, 85 bgs.
Hamburg, 43 cks.
Rotterdam, 100 bgs.
Sodium Silicate—
Rotterdam, 2 cks.
Stearine—
Boulogne, 3 cs.
Ultramarine—
Rotterdam, 5 cks. 6 cs.
Waste Salt—
Hamburg, 500 bgs.

GRIMSBY.

Week ending December 24th.

Caoutchouc—
Hamburg, 1 cs.
Dieppe, 1 1 blk.
Chemicals (*otherwise unaescribed*)
Antwerp, 1 ck. 6 dms.
Hamburg, { 9 bgs. / 7 cks.
Colours—
Antwerp, 6 cks. 2 cs. 64 pks.
Dieppe, 5
Hamburg, 21 50
Ethyl Chloride—
Hamburg, 1 cs.
Farina—
Hamburg, 400 bgs.
Glue—
Antwerp, 1 ck.
Pitch—
Hamburg, 87 cks.

EXPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending December 28th.

Acids—
E. London, 25 cs. £50
Shanghai, 9 18
Foochow, 5 14
Alkali—
New York, 9 t. 10 c. £131
Singapore, 6 5
Alum Waste—
Calcutta, 40 t. 10 c. £99
Ammonia—
Sydney, 8 cs. £11
Delagoa Bay, 10 13
Ammonium Carbonate—
Rotterdam, 70 b ls. £28
Paris, 1 t. 26
Treport, 1 26
Ammonium Chloride—
Sydney 2 t. £70
Trebizonde, 5 brls. 33
Ammonium Sulphate—
Bordeaux, 30 t. 15 c. £300
Jersey, 60 2 5,9
Hamburg, 100 1,026
Jamaica, 2 5 23
Madras, 2 10 35
Bremen, 250 2,545
Rotterdam, 50 500
Ghent 280 2 2,803
Mauritius, 101 13 1,000
Martinique, 75 900
Arsenic—
Hiogo, 1 t. £19
Reval, 10 4 c. 197
Barium Binoxide—
Paris, 10 t. 4 c. £380
Bleaching Powder—
Durban, 2 t. £17
Borax—
Brisbane, 1 t. £14
Carbonic Acid Gas—
Amsterdam, 18 cyldrs. £60
Caustic Soda—
Philadelphia, 134 t. £800
Chemicals (*otherwise undescribed*)
Antwerp, 3 brls. £37
New York, 50 177
Brussels, 5 58
Bombay, 14 cs. 51
Durban, 6 80
Penang, 4 11
Melbourne, { 4 cks. 5 dms. / 110 pcs. (pt) 203 / 20 frkns. 25 pks.
Halifax, 1 12
E. London, 3 kgs. 10
Hamburg, 10 59
Rotterdam, 10 61
Cologne, { 5 / 10 cks. 43
Bordeaux, 1 cs. 19
Sydney, { 31 20 / 11 c. 293
Citric Acid—
Bombay, 3 cks. 1 c. £25
Newcastle, 10 62
Reval, 2 t. 10 290
Durban 3 18
Rotterdam, 2 kgs. 1 19
Coal Products—
Alizarine
Sydney, 8 pks. (pt.) £43
Aniline
Rangoon, 3 cs. £34
Melbourne, 3 83
Dunedin, 2 pks. 8
Anthracene
Dusseldorf, 73 cks. £510
Carbolic Acid
Cologne, 48 cks. £240
Antwerp, 40 dms. 120
Creosote
Antwerp, 101 cks. £80
Dyes
Boulogne, 13 cks. £370
Naphthaline
E. St. Louis, 100 cks. £95
Montreal, 27 35
Pitch
Alexandria, 250 brls. £86
Hamburg, 19 cks. 18
Rangoon, { 25 / 20 kgs. 21
Sydney, 12 17
Seville, qty. 600
Antwerp, qty. 580
Cette, qty. 1,655
Salonica, 100 30
Dunkirk, 150 t. 190
Tar
Aden, 15 rnlts. £10
Brisbane, 100 dms. 21
Sydney, 10 20
Hamburg, 220 brls. 95
Natal, 200 29
Trinidad, 30 pks. 26
Rangoon, 20 cks. 20
Tar Oil
Algoa Bay, 50 cks. £31
Copper Sulphate—
Amsterdam, 6 t. 6 c. £120
Newcastle, 2 18
Paris, 129 10 2,439
Treport, 15 281
Dunkirk, 5 94
Bordeaux, 48 10 906
Brisbane, 1 5 22
M. Video, 6 2
Vigo, 11 16
Cream of Tartar—
Sydney, 10 c. £37
Disinfectants—
Durban, 5 cks. £32
Cape Town, 6 cs. 84
Calcutta, 125 pks. 13
Sydney, 45 133
Wellington, 12 dms. 20
Montreal, 4 17
Shanghai, 7 40
Zanzibar, 250 86
Glycerine—
Antwerp, 1 dm. £23
Guano—
Jersey, 26 t. £164
Gypsum—
Jersey, 5 t. £7
Hydrochloric Acid—
Martinique, 112 crbys. £23
Manure—
Jersey, 150 t. 2 c. £581
Lisbon, 8 30
Cape Town, 50 225
E. London, 8 19 51
Gothenburg, 94 10 270
Treguier, 80 280
Barbadoes, 10 13 95
Cherbourg, 110 325
Brisbane, 6 5 31
Fremantle, 5 25
Jamaica, 60 542
Phosphates—
Jamaica, 5 t. £14
Phosphoric Acid—
Martinique, 3 brls. £10
Potassium Cyanide—
Fremantle, 5 t. £610
Maryboro, 13 c. 38
Melbourne, 18 58
Auckland, 10 934
Potassium Prussiate—
Yokohama, 20 kgs. £63
Salt Cake—
Brussels, 130 t. £230
Saltpetre—
Sydney, 1 t. £21
Auckland, 5 c. 12
Montreal, 5 97
Toronto, 1 6 26
Hamburg, 1 2 22
Sheep Dip—
B. Ayres, 492 cks. £246
Jamaica, 90 dms. 45
Pt. Elizabeth, 2 0 0 200
Wellington, 11 t. 14 c. 190
Soap Lyes—
Hamburg, 14 t. 18 c. £298
Soda—
Melbourne, 1 t. 8 c. £72
Sodium Bicarbonate—
Wellington, 2 t. 10 c £12
Perth, 2 10
Sodium Prussiate—
Antwerp, 15 t. 5 c. £695
Boston, 10 360
Sulphur—
Newcastle, 3 t. £23
Sulphuric Acid—
Durban, 10 kgs. 10 cs. £36
Colombo, 10 dms. 36
Superphosphates—
Jersey, 90 t £172
Tartaric Acid—
Hiogo, 2 c. £11
Sydney, 11 62
Newcastle, 5 29
Bombay, 10 cs. 34

LIVERPOOL.

Week ending December 28th.

Alkali—
Genoa, 64 t. £281
Cartagena, 19 c. 3 q. 4
Leghorn, 9 16 3 40
Salonica, 9 15 3 40
Alum—
Melbourne, 1 t. 10 c. 2 q. £7
Sydney, 3 15
Madras, 19 3 5
Lyttelton, 2 1 3 10
Havana, 2 2 1 10
Santos, 2 10 14
Aluminous Cake—
Melbourne, 1 c. 3 q. £18
Ammonia—
Callao, 2 c. £5
Ammonia (Anhydrous)—
Colombo, 5 cs. £35
Pt. Said, 1 t. 4 c. 38
Ammonium Carbonate—
Santander, 2 t. 2 c. £64
Konigsberg 10 14
Genoa, 2 10 70
Melbourne, 9 2 q. 11
Kobe, 3 13 2 92
Vera Cruz, 12 15
Hamburg, 1 10 49
Ammonium Chloride—
Philadelphia, 23 t. 13 c. 3 q. £494
Bombay, 2 5 81
Marseilles, 14 28
Tripoli, 4 7
Bourgas, 1 1 35
Beyrout, 1 10 50
St. John, N.B., 2 35
Piræus, 1 15 41
Genoa, 3 8 3 99
Barcelona, 4 7 139
Ammonium Sulphate—
Valencia, 50 t. 10 c. 1 q. £481
Demerara, 95 563
Genoa, 30 301
Gandia, 40 12 408
Bordeaux, 5 44
Alicante, 25 8 260
Boston, 50 15 530
Honolulu, 15 1 3 150
New York, 120 15 1,285
Basic Slag—
Melbourne, 507 t. £1,690
Granville 350 210
Bari, 51 bgs. 8
Bleaching Powder—
Amsterdam, 15 cks.
Baltimore, 60
Bilbao, 28
Boksburg, 20 dms.
Boston, 382
Calcutta, 210 cs.
E. St. Louis, 27
Ghent, 75
Leghorn, 5
Lisbon, 35
Milwaukee, 60
Naples, 6
Newport News, 19
New York, 27 brls.
Tampico, 49
Boracic Acid—
Rotterdam, 10 c. £13
B. Ayres, 1 t. 1 23
Borax—
Copenhagen, 60 brls. £300
Hamburg, 10 t. 15 c. 3 q. 173
Boston, 5 76
Antwerp, 10 3 171
Dunedin, 2 31
Rotterdam, 29 16 1 479
Hankow, 5 18
Calcium Chloride—
Napier, 111. 6 c. £25

Sydney, 2 2 5
Rangoon, 2 5
Santos, 3 1 7
Melbourne, 5 2 14

Carbolic Acid—
New York, 15 cks. £120
Bombay, 4 c. 8
Calcutta, 3 39
Rotterdam, 9 t. 12 209
Yokohama, 6 3 1 q. 302
B. Ayres, 4 18 1 250

Caustic Potash—
Cuidad Bolivar, 14 c. £19
Baltimore, 5 t. 2 133
Havre, 1 8 36
Melbourne, 4 6

Caustic Soda—
Acajutla, 76 dms.
Alexandretta 60
Ancona, 141
Antofagasta, 10
Antwerp, 37 6 brls.
Athens, 52
Barcelona, 8
Bari, 176
Batavia, 15
Bejar, 27 6
Boksburg 10
Bombay, 90
Boston, 150
B. Ayres, 51
Ceara, 10
Dunedin, 18
E. London, 8 cs.
Fiume, 15
Genoa, 158
Hamburg, 26
Hiogo, 154
Hong Kong, 20
Jaffa, 60
La Vera de Cora, 15
Leghorn, 35
Libau, 122
Lisbon, 150
Marseilles, 20
Mauritius, 25
Melbourne, 65
M. Video, 25
Naples. 6
N. Orleans, 50
Paris, 40
Penang, 10
Piræus, 20
Pt. Natal, 10
Porto Alegre, 200
Saltillo, 4
Seville, 150
Talcahuano, 100
Tampico, 440
Vera Cruz, 46

Chemicals (*otherwise undescribed*)
Barcelona, 1 t. £29
Piræus, 12 c. 3 q. 23
Melbourne, 5 75
Madras, 3 15 1 270
Cape Town, 4 brls. 6
Constantinople, 30 99
Alexandretta, 10 33
Limassol, 1 3
Cairo, 40 130
Bombay, 177 265
Rangoon, 5 24

China Clay—
Baltimore, 351 cks.
Boston, 2,449
Newport News, 100
Portland, 520
Portland, M., 442
Rangange, 140

Coal Products—
Aniline Salts
Bombay, 4 cs.
Genoa, 16 cks.
Pitch
Colombo, 8 brls.
Fernando Po, 30
New York, 15
Rotterdam, 250 t.
Tar
Lagos, 10 brls.
Manaos, 130 dms.
Philadelphia, 100

Copperas—
Acajutla, 2 c. £5
Vera Cruz, 3 t. 4 3 q. 6
Calcutta, 28 12 57
Trieste, 19 7 3 37

Copper Sulphate—
Leghorn, 5 t. £80
Catania, 24 19 c. 544
Bordeaux, 144 4 2,454
Calcutta, 5 83
Batoum. 35 3 460
Rio de Janeiro, 5 1 5
Callao, 3 1 56
Algiers, 23 18 238
Patras, 18 16
Venice, 12 8 2 q. 203
Nantes, 21 7 2 353

Cream of Tartar—
St. John, N.B., 1 t. £80

Disinfectants—
Colombo, 1 t. 7 c. 3 q. £20
Vera Cruz, 3 8

Dyestuffs—
Aniline Colours
Hespeler, 15 kgs.
Bombay, 15 cks.
Lisbon, 1 1 cs.
Extracts
Antwerp, 4 cks.
Boston, 25
Logwood
Lisbon, 1 ck.

Dyestuffs (*otherwise undescribed*)
Lisbon, 25 pks.
Montreal, 1 cs.

Glycerine—
Bilbao, 12 t. 12 c. £568
Piræus, 19 55
Vera Cruz, 18 35
Tuticorin, 2 6
Lisbon, 8 pks. 34

Guano—
Malaga, 29 t. 18 c. £210
New York, 50 250

Lead Acetate—
Havana, 5 c. £7

Magnesia—
Barcelona, 98 cs.
Monterey, 1

Magnesium Sulphate—
Boston, 220 kgs.
Pernambuco, 20 bgs.

Manganese Sulphate—
New York, 1 t. 5 c. £15

Manure—
Philadelphia 1 t. £14
B. Ayres, 1 9 c. 31

Oxalic Acid—
Boston, 9 t. 2 c. £250
Philadelphia, 7 193
Barcelona, 3 76

Paint—
Antofagasta, 21 dms.
Antwerp, 17 kgs.
Bombay, 12
Calcutta, 75
Colombo, 7 cks.
Curacao, 80 30 pks.
Delagoa Bay, 14 cs.
Genoa, 101 dms.
Hong Kong, 50
Hamburg, 11
Kurachee, 5 cks.
Liviagstone, 4 cs.
Manaos, 50
Manila, 10 cks.
Manzanillo, 2
Monrovia 7
M. Video, 14 crts. 5 cs.
New York, 4 cks.
Old Calabar, 130 pks.
Oporto, 18
Para, 14 10
Penang, 24
Piræus, 7
Pt. Natal, 40 kgs.
Puerto Cabello, 1 cs.
Rio de Janeiro, 22
Rio G. do Sul, 20
St. Lucia, 40
Sagua, 3 brls.
Seville, 6
Samana, 3 cks.

Painters' Colours—
Bombay, 420 kgs.
Cincinatti, 3 cks.
Havana, 6 brls.
Lisbon, 6
M. Video, 10

Paraffin Wax—
Genoa, 250 bgs.
Havre, 15 cs.
Leghorn, 360

Phosphorus—
Hong Kong, 10 c. £105
Progresso, 4 45
Shanghai, 10 84
Yokohama, 1 t. 210

Potashes—
B. Ayres, 1 t. 8 c. 1 q. £31

Potassium Bichromate—
Barcelona, 5 t. £262
Rio de Janeiro, 9 c. 3 q. 15
Tampico, 4 3 10
Vera Cruz, 2 19 124

Potassium Carbonate—
Manaos, 1 t. 2 c. 3 q. £27

Potassium Chlorate—
Boston, 5 t. £150
Copenhagen, 1 10 c. 45
New York, 10 300
Vera Cruz, 2 60

Potassium Prussiate—
Vera Cruz, 2 t. £110

Salt—
Abonnema, 20 t.
Algoa Bay, 17
Bakana, 80
Baltimore, 574
Bata, 11 5 c.
Boston, 100
Buenaventura, 200 18
Burutu, 385 18
Calcutta, 791
Cameroons, 150 14
Cape Town, 50 cs.
Delagoa Bay, 30
Egwanga, 40 3 c.
Ensayo, 15
Galveston, 747 15
Ghent, 150
Halifax, 137 12
Konillon, 32 2
Lagos, 90
Landana, 53 9
Manaos, 156 5
Melbourne, 110
Montreal, 88 1
N. Orleans, 1,349
Old Calabar, 285 1
Opobo, 40 3
Portland, 300
Rio Del Rey, 98
Rotterdam, 300
San Juan, 1
Sierra Leone, 75
Sydney, 50
Svendborg, 106
Victoria, B.C., 50

Salt Cake—
Antwerp, 274 t. £349
Baltimore, 50 8 c. 88
Leghorn, 5 10
Philadelphia, 25 14 42

Saltpetre—
Bahia, 10 c. 2 q. £17
Ceara, 19 2 21
M. Video, 8 11
Para, 10 9

Sheep Dip—
B. Ayres, 25 t. 4 c. 2 q. £848
Calcutta, 25 kgs. 100 dms. 18
Cape Town, 250 28
M. Video, 30 cs. 462 181

Soap—
Addah, 50 bxs.
Adjuah, 52
Alexandria, 21
Algiers, 3
Algoa Bay, 135 cs.
Amsterdam, 250
Antwerp, 22 pks.
Appam, 200
Athens, 12
Barbadoes, 300
Barberton, 17
Beeby, 40
Bloemfontein, 15
Bombay, 971 31
Cairo, 140
Calcutta, 60 6
Cameroons, 200
Cape Town, 161 42
Caracas, 1
Constantinople, 20
Delagoa Bay, 150
E. London, 1
Galata, 85
Genoa, 108
Gibraltar, 100
Havana, 10
Hong Kong, 13
Half Jack, 55
Johannesburg, 500
Las Palmas, 295
Loango, 20
Lucknow, 8
Madras, 30
Malta, 25
Manaos, 2,360
Mannheim, 560
Menado, 1,000
Milan, 15
Montreal, 20 kgs.
Mossel Bay, 25 bxs.
Ottawa, 300
Piræus, 11
Pt. Natal, 1,720
Pt. Said, 150
Progresso, 1
Roodepost, 50
Rotterdam, 400
St. John's, 3
San Juan, 840
Shanghai, 30
Sierra Leone, 220
Teneriffe, 500
Winnebah, 305

Soda—
Baltimore, 15 dms.

Soda Ash—
Antwerp, 1,350 bgs.
Barcelona, 60 cks.
Bilbao, 100
Boston, 1,310
B. Ayres, 90
Calamata, 30 brls.
Calcutta, 35 kgs. 50
Cape Town, 40
Fiume, 100 bgs.
Genoa, 100
Ghent, 465
Leghorn, 241 60
Madras. 10
Maracaibo, 50
New York, 100 100 / 62 tcs.
Paris, 107
Pasages, 20
Philadelphia, 600
Piræus, 20 brls.
Porto Alegre, 50
Rio de Janeiro, 50
San Francisco, 420

Soda Crystals—
Bombay, 10 cks.
B. Ayres, 200 brls. / 7 kgs.
Coquimbo, 30
M. Video, 10
Pisagua, 50

Sodium Bicarbonate—
Antwerp, 13 cks.
Barcelona, 110 kgs. 75
Bombay, 225 8
Calcutta, 1,250
Malaga, 80
New York, 100
Rangoon, 100
Rio de Janeiro, 7
Seville, 38 pks.
Wellington, 40
Zante, 1 brl.

Sodium Carbonate—
Rio de Janeiro, 6 cs.

Sodium Hyposulphite—
Antofagasta, 30 brls.

Sodium Nitrate—
Rio de Janeiro, 4 kgs.

Sodium Silicate—
Seville, 10 brls.

Sodium Sulphate—
Rio de Janeiro, 6 cs.

Starch—
Pernambuco, 5 bgs.

Sulphur—
Boston, 25 t. 1 c. £107
Lagos. 1 15 13

Sulphuric Acid—
Cuidad Bolivar, 15 c. 2 q. £8
Ceara, 4 3
Maranham, 1 t. 2 15
Pernambuco, 16 12

Superphosphates—
Alicante, 39 t. 7 c. £119
Castellon, 98 8 229
Gandia, 80 2 1 q. —
Malaga, 30 85
Tarragona, 10 25
Teneriffe, 20 70
Valencia, 269 2 2 —

Tartar Emetic—
Vera Cruz, 11 c. 1 q. £36

Varnish—
Algoa Bay, 1 cs.
Calcutta, 4 dms.
Cartagena, Sp, 1 ck.
M. Video, 1
Rotterdam, 2
Tunis, 1

MANCHESTER.

Week ending December 28th.

Alizarine—
Alexandretta, 11 cks.

Alum—
Alexandria, 50 brs.
Tripoli, S., 10

Aniline Colours—
Belgium, 2 pks.
Germany, 4 kgs. 1 ck.
Alexandretta, 1
Germany, 9
Carbolic Acid—
France, 40 botts.
Germany, 200 cks.
Chemicals (*otherwise undescribed*)
Boston, 16 cks.
Coal Products—
Aniline Oil
Belgium, 2 dms.
Boston, 3
Aniline Salts
Alexandria, 1 ck.
Boston, 30 cs.
Naphthylamine
Switzerland, 15 cks.
Pitch
Marseilles, 1,045 t.
Switzerland, 1,957
Copperas—
Alexandria, 166 brls.
Tripoli, S., 15
Dyestuffs (*otherwise undes.*)—
Magog, 1 ck.
Extracts—
Germany, 10 cks.
France, 10
Glue—
Belgium, 10 cks.
Germany, 29
Glycerine—
Belgium, 1 dm.
Germany, 50 crbys.
Paint—
Beyrout, 10 cks.
Potassium Bichromate—
Alexandretta, 1 ck.
Alexandria, 1
Salt—
St. John, N.B., 90 t.
Soda Crystals—
Larnaca, 1 brl.
Sodium Naphthionate—
Germany, 7 cks.
Switzerland, 16
Varnish—
Beyrout, 7 cs.
Zinc Chloride—
Holland, 1 ck.
Zinc Sulphate—
Montreal, 16 cks.

HULL.

Week ending December 24th.

Alkali—
Christiania, 92 cks. 120 bls.
Helsingfors, 30
Ammonium Sulphate—
Antwerp 1,000 bgs.
Borax—
Wyburg, 1 ck.
Chemicals (*otherwise undescribed*)
Amsterdam, 4 cks
Bombay, 2 77 brls.
Christiania, 9 cs. 12 pks.
Copenhagen, 28 7 65 btls.
Gothenburg, 2 10 705 slabs
Hamburg, 27 68
New York, 10
Riga, 6 33 pks.
Rotterdam, 80 210
Reval, 3 35 btls.
Stettin, 10 3 pks.
Wyburg, 1
Cottonseed Oil—
Amsterdam, 503 c.
Antwerp, 1,545
Bremen, 60
Copenhagen, 90
Dunkirk, 509
Danzig, 17
Ghent, 200
Hamburg, 698
Konigsberg, 50
Rotterdam, 468
Stettin, 300
Creosote—
Christiania, 19 cks.
Copenhagen, 30
Gothenburg, 5
Creosote Salts—
Antwerp, 146 brls.
Dyestuffs (*otherwise undescribed*)
Boston, U.S.A., 5 cks.
Hamburg, 4
Rotterdam, 3
Glue—
Gothenburg, 5 bls.
Linseed Oil—
Alexandria, 60 c.
Amsterdam, 189
Bombay, 155
Christiania 65
Drontheim 130
Hamburg, 42
Kurachee, 41
Manure Meal—
Dunkirk, 923 bgs.
Mineral White—
Bergen, 70 bgs.
Paint—
Christiania, 44 kks.
Painters' Colours—
Amsterdam, 16 cks.
Antwerp, 14 3 cs. 40 pks.
Boston, U.S.A., 50
Bombay, 10 133 893 kgs.
Christiansand, 16 pks.
Copenhagen, 3 1 32 dms.
Dunkirk, 18
Ghent, 35 1 32
Gothenburg, 1
Helsingfors, 1 8
Hamburg, 19 13
Libau. 1
New York, 51 15
Rotterdam, 33 21
Reval, 1
Stettin, 30
Stavanger, 4 12
Pitch—
Antwerp, 308 t.
Dunkirk, 210
Soap—
Amsterdam, 92 cs.
Helsingfors, 3
Hamburg, 1
Riga. 1
Stettin, 1
Starch—
Boston, U.S.A., 50 cs.
Riga, 8 bgs.
Tallow—
Antwerp, 54 cks.
Bombay, 12 brls.
Riga, 13
Stockholm, 7
Tar—
Amsterdam, 15 cks.
Copenhagen, 28
Hamburg, 17
Turpentine—
Bombay, 20 dms.
Varnish—
Antwerp, 2 cks.
Bombay, 75 dms.
Hamburg, 1
Norrkoping, 3

GLASGOW.

Week ending December 29th.

Alkali—
Yloilo, 7 t. 19½ c.
Ammonium Sulphate—
Barbadoes, 50 t.
Bordeaux, 10 3 c.
Hamburg, 152 2
Borax—
Antwerp, £60
Christiania, 8
Castor Oil—
Melbourne, 1 t. 7 c.
Chemicals (*otherwise undescribed*)
Rotterdam, £13
Chrome Ore—
Rotterdam, £4 10s.
Coal Products—
Benzol
Rotterdam, £95
Creosote
Lisbon, £507
Naphtha
Christiania, £4 4s.
Rotterdam, £166
Pitch
Hamburg, 12 t.
Tar
Hamburg, 2 t. 15 c.
Singapore, 444
Transvaal, 23
Dextrine—
U.S.A., £214
Dyestuffs (*otherwise undescribed*)
U.S.A., £27
Extracts—
Belgium, £25 2s.
Glucose—
Christiania, 3 t. 2 c.
Iodine—
Rotterdam, £1,164
Linseed Oil—
Alexandria, 2 t. 1¾ c.
Logwood—
Portugal, £22 17s.
Magnesia—
Hamburg, £9
Manganese (Recovered)—
Antwerp, £118
Manure—
Nantes, 10 t. 7 c.
Paint—
Alexandria, £62 10s.
Kimberley, £45
Transvaal, 36
Trinidad, 29
Painters' Colours—
Antwerp, £75
Barbadoes, £22 4s.
Calcutta, 167 5
Manila, £55
Singapore, 60
Yloilo, 85
Paraffin Wax—
Bordeaux, £230
Christiania, 34
Rotterdam, 20
Rouen, 54
Potassium Bichromate—
Amiens, £145
Lisbon, 27
Portugal, 30
Rotterdam, 85
Potassium Prussiate—
Calcutta, £32
Salt—
Christiania, 3 c.
Soap—
Calcutta, 5 t. 6½ c.
Singapore, 2 5½
Tin Crystals—
Lisbon, £22
White Lead—
Johannesburg, £36
Natal, 51

TYNE.

Week ending December 24th.

Alkali—
Calmar, 38 t. 7 c.
Ammonia—
Bergen, 12 c.
Ammonium Carbonate—
Drontheim, 1 t. 6 c.
Ammonium Chloride—
Barcelona, 1 t.
Pomaron, 2 c.
Antimony—
Antwerp, 1 t.
Hamburg, 2 10 c.
New York, 6
Barium Binoxide—
Rotterdam, 10 t. 15 c.
Barium Carbonate—
Copenhagen, 3 t.
New York, 50 10 c.
Bleaching Powder—
Aarhuus, 10 t. 3 c.
Antwerp, 5 1
Batoum, 5 1
Copenhagen, 2 12
Drontheim, 9 3
Lisbon, 15
Odense, 15 2
Rotterdam, 32 9
Caustic Soda—
Bergen, 1 t. 2 c.
Copenhagen, 6 13
New York, 100 8
Rotterdam, 1 16
Chemicals (*otherwise undescribed*)
Sebastopol, 14 c.
Fluor Spar—
New York, 107 t. 8 c.
Glue—
Sebastopol, 2 lbs.
Guano—
Jersey, 83 t. 7 c.
Iron Oxide—
Sebastopol, 3 t. 10 c.
Litharge—
Gothenburg, 1 t. 1 c.
Rotterdam, 5
Magnesia—
Antwerp, 1 c.
Barcelona, 4 t. 8
B. Ayres, 25 bls.
Hamburg, 1 t. 13
Manure—
Jersey, 3 t. 1 c.
Paint—
Antwerp, 5 t. 4 c.
Hamburg, 2
Malta, 5
Rotterdam, 1 3
Painters' Colours—
Antwerp, 4 c.
Rosin—
Sebastopol, 6 t. 7 c.
Slag—
Rotterdam, 200 t.
Soda—
B. Ayres, 15 t.
Ergasteria, 5 9 c.
Rotterdam, 24 17
Soda Ash—
Calmar, 104 t. 11 c.
Gothenburg, 55
Lisbon, 20 9
Sodium Hyposulphite—
New York, 39 t. 2 c.
Sulphur—
Gothenburg, 25 t.
White Lead—
Stavanger, 2 t. 15 c.

GOOLE.

Week ending December 21st.

Chemicals (*otherwise undescribed*)
Amsterdam, 20 cks.
Hamburg, 18
Rotterdam. 20
Coal Products (*otherwise undes.*)—
Amsterdam, 186 cks.
Boulogne, 3 1 cs.
Calais, 1
Ghent, 8
Rotterdam, 3
Dyestuffs (*otherwise undescribed*)
Ghent, 1 cs.
Hamburg, 7
Rotterdam, 5 cks. 1
Glue—
Boulogne, 50 bgs.
Logwood—
Hamburg, 5 t.
Manure—
Ghent, 99 bgs.
Painters' Colours—
Antwerp, 1 ck.
Boulogne, 14 13 cs.
Rotterdam, 13
Pitch—
Antwerp, 580 t.

GRIMSBY.

Week ending December 24th.

Alkali—
Hamburg. 10 cs.
Caoutchouc—
Malmo, 1 blk.
Chemicals (*otherwise undescribed*)
Antwerp, 5 kgs.
Dieppe, 8 cs.
Malmo, 3
Coal Products (*otherwise undes.*)—
Dieppe, 58 cks.
Colours—
Malmo, 25 pks.
Dyestuffs (*otherwise undes.*)—
Rotterdam, 1 ck.
Painters' Colours—
Antwerp, 1 ck. 1 cs. 4 pks.
Pitch—
Antwerp, 57 t.
Malmo, 16 brls.
Stearine—
Malmo, 25 cs.

PRICES CURRENT.

WEDNESDAY, JAN.. 4, 1899.

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9	&	8/3
,, Glacial .. .. ,,		35/-	
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	1	0
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	1
Arsenic, white powdered .. .. nett per ton	16	5	0
Alum, loose lump .. .. ,,	4	5	0
Alumina Sulphate (pure) .. .. ,,	3	15	0
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2¾
,, = 24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	19	0	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	10	2	6
,, ,, (grey) Hull .. .. ,,	10	2	6
Aniline Oil (pure) .. .. per lb.	0	0	4¾
Aniline Salt ,, ... ,,	0	0	4¼
Antimony .. .. per ton	37	0	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	4	10	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	5	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizatine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 3 % A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	9
,, 50/90 ,, ... ,,	0	0	9
Carbolic Acid (crude 60°) .. .. ,,	0	1	11
,, (crystallised 40°) .. .. .. per lb.	0	0	6¾
,, (liquid 95/97%) .. .. .. per gallon	0	1	0
Creosote (ordinary) .. .. ,,	0	0	2⅞
,, (filtered for Lucigen light) .. .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	2	0
Solvent Naphtha, 90% at 160° .. .. per gallon	0	1	2
Copper .. .. per ton	58	2	6
,, Sulphate .. .. ,,	18	15	0
,, Oxide (copper scales) .. .. ,,	47	10	0
Glycerine (crude) 80% .. .. ,,	24	0	0
,, (distilled S.G. 1250°) .. .. ,,	48	10	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	2	6
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	14	10	0
,, Litharge Flake (ex ship) .. .. ,,	16	10	0
,, Acetate (white ,,) .. .. ,,	25	0	0
,, ,, (brown ,,) .. .. ,,	17	15	0
,, Carbonate (white lead) pure .. .. .. ,,	17	10	0
,, Nitrate .. .. ,,	20	0	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	7	6
,, ,, (grey) (ex ship) .. .. ,,	7	15	0
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton	9	10	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	16	0	0
,, Borate .. .. per cwt.	2	2	6
,, Ore, 70% .. .. per ton	3	10	0
Methylated Spirit, 61° O.P .. .. per gallon	0	2	0
Naphtha (Wood), Solvent .. .. ,,	0	2	10
,, ,, Miscible, 60° O.P. .. .. .. ,,	0	3	9
Oils:—			
Cotton-seed .. .. per ton	15	5	0
Linseed .. .. ,,	18	0	0
Stearine .. .. ,,	26	0	0
Phosphorus (Yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	14	15	0
,, Chlorate .. .. per lb.	0	0	3⅝
,, Cyanide, 98 % .. .. ,,	0	1	0
,, Hydrate (Caustic Potash) 90 % .. .. per ton	22	0	0
,, ,, ,, 75/80 % .. ,,	17	15	0
,, Potash Hydrate Liquid 50 % .. .. ,,	10	5	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	2	12	6
,, Prussiate Yellow .. .. per lb.	0	0	6⅞
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	0
,, Muriate, 80 % ,, ... ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3¼
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % ..nett per ton f.o.r. wks.	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, f.o.r. wks.	4	5	0
,, ,, (Carb. Soda-ash) 48 % .. ,, ,, f.o.r. wks.	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, f.o.r. wks.	4	0	0
,, ,, (Soda Crystals) .. .. .. ,, ,, f.o.r. wks.	2	7	6
,, Acetate (ex-ship) .. .. ,,	12	5	0
,, Arseniate, 45 % .. .. ,,	13	0	0
,, Chlorate .. .. per lb.	0	0	3¾
,, Borate (Borax) .. .. nett per ton	15	5	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton 10 ton lots	7	12	6
,, ,, (74 % Caustic Soda) ,, ,, ,, 10 ton lots	7	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,, 10 ton lots	6	17	6
,, ,, (60 % Caustic Soda) .. ,, ,, 10 ton lots	5	17	6
,, ,, (pure liquor 90° Tw.) .. ,, ,, 10 ton lots	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25 % .. .. ,,	16	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	6
,, Nitrite, 98 % .. .. per ton	25	0	0
,, Phosphate .. .. ,,	10	7	6
,, Prussiate .. .. per lb.	0	0	5¼
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	7	6
,, Stannate, 40 % .. .. per cwt.	2	15	0
,, Sulphate (Salt-cake) .. .. per ton	1	8	6
,, ,, (Glauber's Salts .. .. .. ,,	1	7	6
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	4	15	0
Strontium Hydrate, 100 % .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. .. per lb.	0	0	5¾
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton	7	2	6
,, (Roll Brimstone) .. .. ,,	6	3	9
,, Brimstone: Best quality .. .. ,,	4	12	6
Superphosphate of Lime (26 %) .. .. ,,	2	10	0
Tallow .. .. ,,	23	10	0
Tin Crystals .. .. per lb.	0	0	6
,, English Ingots .. .. per ton	94	0	0
Zinc (Spelter) .. .. ,,	24	5	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	7	5	0
,, Sulphate, Crystal .. .. ,,	6	7	6

THE

CHEMICAL TRADE JOURNAL

AND

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LATE ADVERTISEMENT.

TO BE LET on Lease or Sold, a Valuable Wharf and Land for Chemical Works on River Thames, near Gravesend, with three Barge Berths, 120 feet frontage to the River. Applicant could be assisted.—Apply, "Box 9," *Chemical Trade Journal* Office, Manchester.

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Advertisements intended for insertion in the current week's issue should reach the office by **Thursday morning** at the latest.

CURRENT TOPICS.

THE OLD OFFENDER.

AT last there seems to be some possibility of the long-suffered absurdities of the Local Government Board being brought to an end. We have often instanced the vagaries of the Board in the administration of the sewage department, but this is but one of the many causes of complaint against the Board for its unreasoning stolidity and antiquated methods of procedure. With the retirement of the permanent secretary (Sir Hugh Owen) it may be possible to infuse a little life and judgment into the policy of the Board, especially as the recent Commission will act as a convenient medium for inaugurating the necessary changes and reforms.

We are willing to admit that the formation of county councils and district and parish councils, and the work involved in setting on foot such measures as the Rating Act, must have thrown a heavy strain upon this office; but when every allowance is made, it cannot be said that Sir Hugh Owen leaves the Department, of which he has been for many years the real controller, in anything like helpful touch with the local authorities, or that he bequeaths a standard of administration which is either intelligent or feasible. If the local authorities of England and Wales were consulted, we feel tolerably confident that they would denounce the Board with one voice for its dilatory methods—amounting at times to positive obstruction—and for its wooden habits of mind. Nowadays progression is rapid, and it is as much as one generation after the other can do to keep in harmony with its altered surroundings and conditions of life. Those whose years extend beyond the allotted span find themselves quite out of touch with the rising generation, which, despite its additional progressiveness, will only be fully "fit" for a matter of 15 years or so, and then in turn fall behind into the ranks of the old-fashioned.

What, then, must be the state of the L.G.B. which has quite failed to respond to the movement of the times for nearly twenty years? Especially as in addition to having ignored the advances made in sewage treatment, etc., during the past decade, the Board has, if anything, persisted in a policy that was inevitably destined to narrow the scope and development of local administration.

The expensive evils attendant upon the neglect and general backwardness of the L.G.B. have so burdened corporate bodies and local authorities that the incubus has become insupportable. If the bristles of the new broom are not more pliable than those of the old one, outside pressure will have to be brought into operation. The proceedings in connection with the Local Government Board inquiry into the Manchester Sewage Scheme will have afforded an opportunity for the exercise of discretion, and it is to be hoped that the decision of the Board will mark the opening of a new epoch in local government history.

THE IODINE INDUSTRY.

The iodine trade is a "close" trade in many respects. A year ago it was stated that a new works was about to start in Scandinavia, and, although the statistical position then favoured this venture, little has transpired since concerning its progress. The returns of the production of iodine are always somewhat belated. This is partly a necessity and partly to be expected, for is not the bulk of the output of iodine produced in Chili? Seeing, therefore, that, thanks to the Iodine Combine, this business is shrouded in mystery, the following official figures are of interest:—The exports from Chili in 1897 amounted to 233½ tons, against 220½ in 1896. The consumption, at an average price of 7'35d. per oz., was 290½ tons, being approximately the same as in the preceding year. European supplies on the 31st December, 1897, reached 893 tons, and on the 31st March last 926 tons, which, including quantity on passage, is equivalent to about four years' requirements. Were it not for the iron-clad "combination," which, by the way, periodically shows signs of falling to pieces, iodine would be selling under 3d. per oz., seeing that the nitrate *oficinas* now at work could easily produce 500 tons per annum at a cost of 2d., put down in Europe.

SOCIETY OF CHEMICAL INDUSTRY.

MANCHESTER SECTION.

THE third meeting of this section was held at the rooms of the Chemical Club, Victoria Hotel, on the 6th inst., at 7 p.m., Dr. Watson being in the chair. The first paper of the evening was one by Dr. Gerland on the "The Lower Sulphonic Acid of Indigotine," in which he gave a number of analyses of numerous sulphonated compounds prepared under varying conditions. The paper embraced the results of one hundred analyses showing the percentage of sulphur in the different compounds, and the ratios between the sulphur percentages in certain series and compounds. There was no discussion.

Mr. Barnes then read a most interesting paper on "The Use of Titanium in Dyeing," which was illustrated by a number of samples and experiments. By its use as a mordaunt the dyeing process is cheapened, and the danger attending the use of antimony salts avoided. In addition to samples dyed by the titanium-tannin oxalate method, many choice samples of wool and cotton, dyed with basic colours on the titanium mordaunt, were exhibited. Mr. Barnes demonstrated by experiment how the presence of iron in the crude titanium solution did not interfere, and also how the presence of chlorides was essential to the mordaunting process. In the discussion he stated that at present he was depending on rutile as his source of titanium, but he instanced the residues from the extraction of alumina from bauxite as a likely source for industrial purposes, as at present these residues often contain 7 % of titanium, which is more or less wasted.

Mr. J. Carter Bell then read a note on the estimation of hardness in waters by the soap test. He complained of the divergencies which occur between analysts with this test; as witness the following figures obtained by four qualified analysts on the same sample of water. Total hardness in grains per gallon:—A=23; B=31; C=18 6; and D=22·3, while the permanent hardness was:—A=7; B=9; C=5·8; and D=4·4. Mr. Bell advocated a modification of the Hehner test by evaporating and titrating with standard acid. There was a discussion, in which Dr. Grossman, Dr. Miller, Mr. F. Scudder, Mr. Irwin, Mr. Shenstone, and others took part, the last named gentleman preferring lacmoid as an indicator for the titration. Various suggestions were made to account for the differences occurring with the soap test, the chief of which was the influence of magnesium salts, in the presence of which certain precautions were necessary. The principal objection to the acid test was the error arising from the presence of alkalies.

Platinum Syndicate.—It is reported from St. Petersburg that a Franco-Belgian company, controlling a capital of 20,000,000f., has been established with a view to purchasing platinum mines in Russia. This wealthy syndicate, which is headed by Baron Oppenheim, intends at the same time to establish the central market of this precious metal at Paris instead of London, where hitherto the principal dealers have been found. The experiment is being watched with a good deal of interest, inasmuch as the platinum industry has lately attracted a good deal of attention.

AMERICAN TRADE PROSPECTS.

THERE seems every reason to expect a great improvement in general trade throughout the United States in the coming year, says the "Statist." Firstly, the victory over Spain is sure to have a great economic as well as political, military, and naval influence upon the American people. The experience of all countries shows how great is the effect of such a triumph, and it will not be less in the United States than it has been hitherto everywhere else. Secondly, it can hardly be doubted that the three good harvests in succession with which the United States has been favoured have by this time enabled the agricultural population to pay off the greater part of their debts, or, at all events, all those debts that were at all urgent and burdensome, and have put them in a position in which they can buy more freely than heretofore. The Dingley Tariff no doubt will check imports; but the Americans are essentially a spending people, like their British kinsmen. When they are doing well they allow themselves comforts and luxuries to the full extent of their means, and it will be strange if there is not a very considerable increase in the imports during the present year. The Dingley Tariff has been in existence only a year and a half. That is too short a time to allow of such a great growth of industries as would supply a population of 75 millions of people with all the enjoyments which they reasonably look for. Whatever may be the ultimate effect of the Dingley Tariff, it seems certain that it cannot yet have answered the expectations of its promoters. But liberal expenditure by the farmers will give a fillip to every trade which ministers to their comforts and their needs, and an improvement in those various trades will extend to all other industries. Thirdly, the elections last month seem to have permanently removed all cause for anxiety respecting the currency. There is now a Sound-money majority in both Houses of Congress. The Secretary of the Treasury is pledged to a reform of the currency, and he is supported by the President. If such a reform is carried—and every one assumes that it will be—it is exceedingly unlikely that the Silverites will be able to do anything very injurious.

DRYSALTERY SALES IN 1899.

DURING the year the following sales of interest to the trade will be held. Most of them are held at the London Commercial Sale-rooms, excepting those for tallow and oil, which take place at the Baltic, and india-rubber, which, together with a few other articles, are sold in one or other of the brokers' showrooms. The dates here given are subject to alteration, of which due notice is given:—

Shellac and Drysaltery Sales every alternate Tuesday at 1 o'clock.

Drug Sales at 10-30 o'clock: January 19th, February 2nd and 16th, March 2nd and 16th, April 13th and 27th, May 11th and 25th, June 8th and 22nd, July 6th and 20th, August 17th and 31st, September 14th and 28th, October 12th and 26th, November 9th and 23rd, and December 7th.

India-rubber Sales every Friday, at 12 o'clock, at one or other of the Brokers' Showrooms.

Gum Sales.—*Varnish Gums*: January 12th, February 9th, March 9th, April 6th, May 4th, June 1st and 29th, July 27th, August 24th, September 21st, October 19th, November 16th, and December 14th. *Arabic, etc., Gums*: January 26th, February 23rd, March 23rd, April 20th, May 18th, June 15th, July 13th, August 10th, September 7th, October 5th, and November 2nd and 30th.

East India Indigo Sales commence January 30th, April 10th, July 10th, and October 9th.

Guatemala Indigo Sales held probably March 6th, July 18th, and October 17th (definite dates fixed at close of East India Indigo sales).

Isinglass Sales at 12 o'clock: January 17th, February 21st, March 21st, April 18th, May 16th, June 20th, July 18th, August 29th, September 26th, October 24th, and November 28th.

Horns, Bones, &c, Sales at 11 o'clock.—*Deer Horns and Bones*: February 16th, May 18th, August 10th, and November 9th. *Buffalo, Ox and Cow Horns, etc.*: February 17th, May 19th, August 11th, and November 10th.

Tallow Sales every Wednesday, at 12 o'clock, at the Baltic Sale-rooms, South Sea House.

Nitrate Statistics.—The Permanent Nitrate Committee's public statistical circular shows total exports to Europe in December:—Quintals, 3,641,000; loading for Europe 1st January, quintals, 1,547,000; imports Europe, December, 74,880 tons; deliveries Europe, December, 53,010 tons; visible supply Europe, January 1, stocks and afloat, 713,710 tons.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Manufacture of Nickel. J. Campbell. 27,287. December 27.
Distillation of Wood, Peat, etc. E. M. J. Larsen. 27,300. December 27.
Manufacture of Cream of Tartar. A. Martignier. 27,328. December 27.
Cement from Limestone and Slag. C. Von Forell. 27,339. December 27.
Concentration of Sulphuric Acid. J. W. Fisher, J. A. Hall, and F. Moore. 27,376. December 28.
Purifying Effluents and Utilising Sewage Sludge. T. J. Barnard. 27,409. December 29.
Manufacture of Cement. J. Hastie and J. Gill. 27,431. December 29.
Electro-deposition of Vanadium. S. C. Cowper-Coles. 27,469. December 30.
Manufacture of Highly Oxidised Bodies. A. Verley. 27,522. December 30.
Coke Conveyors. F. Kellner, 27,523. December 30.
Manufacture and Purification of Anthracene, etc. T. Wilton. 27,559. December 31.
Vapourising and Burning Oil. A. J. Boult. 27,589. December 31

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improved Atmospheric and Water Condenser, and Tar Extractor combined, for use in Gas Manufacture. J. F. Blakeley, Queen Street, Ravensthorpe, Dewsbury, Yorkshire. Eng. Pat. 28,434. December 2, 1897.

The condenser is of the vertical columnar type, the columns being fitted with inclined baffle plates, so disposed as to simulate a spiral screw. At the bottom of the last column a scrubbing chamber is provided. Water is also run down such of the columns as may be convenient in practice. There are five figures.

An Apparatus for treating the Residuum from Fish Offal. T. Watts, 105, Cordova Street, Vancouver, British Columbia, Canada. Eng. Pat. 18,651. August 31, 1898.

The residue left after extracting the oil and gelatine from fish offal is made into fish guano in the following manner :—It first passes along a horizontal mixer and conveyor to the boot of a bucket elevator, which delivers it into the hopper of a disintegrator. From this it passes into a cylindrical revolving sifter, from the end of which the coarsest particles are returned to the elevator. The siftings fall into a V-shaped trough which runs the whole length of the sifter, in the centre of which trough the mouth of the bagging shute enters, so that by operating the left and right handed spiral conveyers, which work in it, the siftings are delivered to the bags at the end of the shute.

Improvements in the Process for the Manufacture of Carbide of Calcium and Apparatus therefor. G. Bower, St. Neots, Hunts. (communicated by J. E. Hewes, 421, Chestnut-street, Philadelphia, U.S.A.). Eng. Pat. 1,935. January 25, 1898.

The furnace is horizontal, with one fixed electrode and the other adjustable. The latter is made up of a number of carbon pencils. The construction of the furnace is such that when the current is passed a conducting core of calcium carbide and molten lime is formed, which is ready to take up carbon. The working cross-section is then increased by regulating the electrodes and the current. The pencils in the adjustable electrode can be protruded in turn, and the electrode can be moved so as to close circuit through the protruding pencils. In this way the working section is increased. There are three figures.

Process for the Production of Acetic Acid. Count H. Plater-Syberg, 81, Rue de la Boëtie, Paris, France. Eng. Pat. 233. January 4, 1898.

The crude acetate solution is decomposed in the cold in an electrolytic vat, provided with an iron positive electrode and a copper cathode. The only precaution to be taken is the addition of a little acetic acid at first in the neighbourhood of the iron anode. On passing the current the liberated acetic acid attacks the iron electrode forming ferrous acetate, leaving the alkaline base free. The solution of ferrous acetate is then heated and atomised in contact with air, when it oxidises into the acetate of iron sesqui-oxide. To this is now added 877 parts by weight of neutral potassium acetate to every 754 parts of the sesqui-acetate, and the whole heated to boiling point. Just before this temperature is reached, double decomposition takes place, the neutral acetate of potash being changed into bi-acetate, and the whole of the iron precipitated as hydrated sesqui-oxide. The resulting solution is heated again when the excess of pure acetic acid is given off, and neutral acetate of potash re-formed, which can be used afresh.

Improved Saponaceous and Bleaching Compounds. H. Young, 113, Rutherglen-road, Glasgow. Eng. Pat. 2,836. February 4, 1898.

The saponaceous compound is prepared by mixing "Matchless Cleanser" soap and Babbits powder. Some salts of tartar and soda crystals are then dissolved in hot water and boiled with a few Quassia chips. This solution is then added to the soap and Babbits powder mixture, and the whole thoroughly incorporated. After cooling for 12 hours, the preparation is finally re-boiled and run into moulds. The bleaching compound consists of a solution containing pearl ash, soda crystals, salts of tartar, and extract of Quassia chips. After cooling, ammonia (presumably in the form of carbonate) is added, and the liquid bottled. The fabrics, etc., to be cleaned are washed with the soap and cleared in the "bleaching" solution.

THE BAKU OIL INDUSTRY.

IS THE S. O. CO. STRIVING FOR A MONOPOLY?

RUSSIAN industries have been considerably developed of late, and have been attracting the attention of foreigners more and more. This is said to considerably handicap native efforts. Foreigners bring their capital, their machinery, and their superior technical knowledge. It is the oil industry which attracts them chiefly, and in London, at all events, attention seems to be specially directed in this line. Already English companies have acquired the wells of Tagiref, Schibaieff, &c., and others are in course of being taken over.

From Baku it is announced that several English business men have arrived. It is also stated that the French have formed several new petroleum companies. The arrival of these individuals has excited mixed feelings. Some are complaining that Russia is being sold piecemeal to foreigners, and that the English arrivals are simply agents of the Standard Oil Company, which wishes to stamp out the native competition and establish a complete monopoly in petroleum. The truth probably is that the Minister of Finance, who is impassive to these complaints, is quietly preparing a net for retaining in Russia the foreign capital which the country's richness has drawn thither.

It is probably known that, according to the Russian Mining Law, foreigners cannot own oil-bearing ground in the Caucasus. In spite of this, however, several English companies have been acknowledged recently, and may now own ground at Baku. There is no question of undoing what has been already done or enforcing prohibitions which would be an anachronism; but some people think that means should be found for preventing the admission of foreigners from doing injury to native efforts. Russia, they say, should derive the greatest benefits from her own industries.

On the other hand a well informed foreign correspondent says there are reasons for believing that the Standard Oil Trust are at the present moment making enormous efforts to acquire all the great petroleum fields of the world. Russia, and more particularly Canada (owing to the latter country being under the British flag, and the titles above question), have been the fields which the Rockefeller interest have been endeavouring to acquire. The Standard people usually get their properties through the agency of a third or fourth party, and it is very amusing to notice how these third or fourth parties disavow all connection with the Standard folk and pose as their greatest enemies, more easily by this means to be able to effect their purposes. Only a few days ago an announcement was made that a well-known oil company had acquired the right of working certain oilfields, and that immense preparations were being made to import petroleum from this field. It was particularly pointed out that this scheme would run counter to the Standard and beat them at their own game, whereas the people concerned are intimately connected with the Standard Oil Trust, and their interests one and the same.

CHANGES OF ADDRESS.—*Messrs. Hemingway and Co.* beg to inform us that, owing to the great increase in their manufacturing business requiring their whole attention, they have removed from their offices at 60, Mark-lane, which they have occupied for the past 25 years, to their works at Marsh Gate-lane, Stratford, E., at which address in future their business, as well as that relating to their branches at New York, Millwall, Somersetshire, and South Wales, will be transacted.—*Messrs. Chas. Tennant and Co.* also advise us that they have arranged to amalgamate their business of soap manufacturers with that of the old established firm of Messrs. Alexander Ogston and Sons, Aberdeen. The united businesses will be conducted under the style of Ogston and Tennant, Ltd., with factories in Aberdeen and St. Rollox, Glasgow. Their chemical and merchant businesses will be continued as hitherto under the old name of Charles Tennant and Co., with offices at Victoria Chambers, 142, West Nile-street, Glasgow; also at Belfast, Dublin, Dundee, &c.

Reports of Companies.

ANGLO-RUSSIAN PETROLEUM CO., LTD.

The second ordinary general meeting was held recently at Winchester House, E.C., Sir Alexander Wilson presiding. The chairman remarked that, under their articles of association, they were obliged to hold their annual meeting before the end of the year, but, of course, there were no accounts to be submitted on that occasion. The company was formed to exploit a territory which had so far been unworked for petroleum, and he might say that he took the matter up because of his confidence in Mr. Townsend, whose report was issued with the prospectus. There were 30,747 shares applied for and allotted, and, after fulfilling the cash obligations to the vendor, they had left available for working capital £20,747., or, with the balance of unissued shares, a total of £40,000. He did not think that they would have any difficulty in placing these shares when the proper time arrived. The transfer of the three properties acquired was made from Dr. Dalgat, the concessionaire, direct to the company, so that all complications of title were obviated. The board sent out a representative to make an investigation as to the validity of the titles from the owners of the respective properties to Dr. Dalgat, and they were found to be in order. In the meantime the question of how best to prove their properties occupied the attention of the board, and, acting on the advice of Mr. Townsend, they decided to send out their own machinery, instead of employing Russian bore masters. Accordingly they ordered a full set of Canadian drilling plant, which, after some delay, arrived on the ground in August last. Mr. Townsend, accompanied by two Canadian drillers, left England for Russia on July 16th, but at Moscow he was taken seriously ill, and had to be brought back to this country, where he had since died. That was a great blow to them, because by the death of Mr. Townsend they had lost a petroleum expert of great experience, and a man in whom they had the utmost faith. With regard to Mr. Crosby, whom they had engaged to superintend the work, Mr. Townsend said, shortly before his death, that he knew of no one whom he would sooner recommend, and added that the company had a property second to none in Russia. Unfortunately, when Mr. Crosby and the drillers reached the property they were stricken down with a malarial fever, which had been prevalent in the Caucasus this year, and they had been more or less *hors de combat* ever since. The board had been led to believe that, owing to the way in which this company had been formed, they might be able to get the recognition of the Government without going through the tedious and somewhat expensive process of petitioning the various Ministers. Unhappily this was found to be impossible, and therefore the necessary documents were submitted to the authorities on October 28, and on the 8th ult. they were pronounced to be in order. He thought, therefore, that the formal recognition of the company by the Government was only a question of time. Meanwhile their position with regard to the concessionaire was such that they had been enabled to commence operations under his power of attorney, he being a Russian subject. It was proposed that the accounts should be made up to the 31st ult., and presented to the annual meeting to be held in March or April next. So far the expenditure had amounted to £6,665. The board had received no fees, and did not intend to take any until they were earned by the company. In a short discussion which followed, several shareholders congratulated the directors on the successful manner in which they had overcome the various difficulties they had had to face. No business resolution was submitted to the meeting.

ARTIFICIAL SILK COMPANY, LTD.

The second annual meeting of the above company was held recently at Wolston, near Rugby. Mr. Joseph Cash presided, and there were present Messrs. A. E. Mellor, E. Nye, and J. A. Scott (directors), and Mr. A. E. Laysell (secretary). The shareholders had been taken round the works, and saw the machinery in motion.—The Chairman, in proposing the adoption of the report and balance-sheet, explained that the extra money expended was owing to the constant additions that had had to be made. He anticipated criticism as to the lowness of the capital in hand by saying that the board had made arrangements for an advance by the bank, which would supply them with all the money they believed would be necessary. The directors had had some difficulties to contend with over the machinery, and difficulty with the Excise in respect of spirits used in the works, one result being that such spirits had to be obtained from Germany. But they had made some progress, and the shareholders had seen silk spun that day. ("No," and "Yes.") They had had an application from the North for a licence to make artificial silk, and that was being considered. He still had faith in the process when all the necessary machinery was laid down.—Mr. Scott seconded the adoption of the report.—A discussion followed, and various points were raised.—The Chairman, replying on these, said Mr. Reid resigned his directorship because, living at Leeds, he could not attend the meetings. The directors would be glad of another colleague, but did not see how one could be chosen at that meeting. The directors had not drawn all the fees they were entitled to, because at present, of course, the company was earning nothing. He denied that the mills were liable to flooding. He thought the remainder of the plant that was needed could be had for £6,000., but with that now in the works it would be possible to earn a profit of £200. per week. He thought there was good hope of a dividend.—Several shareholders also spoke, some holding that the chairman was very optimistic, and others expressing their sympathy with the directors in the difficulties they had had to contend with.—Mr. Cash was re-elected a director, and the auditors (Messrs. Eves, of London) were also re-elected.

PACCHA AND JAZPAMPA NITRATE CO., LTD.

Mr. Andrew D. Chadwick, the liquidator, pre ided recently at an extraordinary meeting of this company. The financial position, he said, was deplorable. They had absolutely not got a penny. The time within which the shareholders and holders of share warrants were, under the scheme of reconstruction, entitled to exercise their rights to claim an allotment of partly-paid shares in the new company had expired, and only some 34,000 shares had been applied for out of the 72,000 which they required. The question, therefore, for the meeting was whether that justified him, as liquidator, in going to allotment. He should mention that the prospects, as he was informed on the highest authority, were much improved since the last meeting, in consequence of the possible formation of a nitrate combination within a very short time. Mr. Nicholl seconded the motion to proceed to allotment, and this being put to the meeting, the attendance at which however was rather limited, it was carried with only one dissentient.

ELECTRICAL COPPER CO., LTD.

The second annual general meeting was held recently at the offices, 14, Sherborne-lane, E.C., Mr. Wm. Jacks presiding. Having referred to the heavy loss which the company had sustained by the death of Mr. H. M. Matheson, who had previously guided the affairs of the company, the chairman said he could not pretend that the report was as favourable as they could have desired it to be. The process was, he said, a perfect success, but when they came to apply it on a large mechanical scale difficulties arose similar to those which often occurred in connection with new inventions, but which had not been anticipated in their case. Some of the machinery was very complicated and not suitable for the purposes for which the inventors intended it, but the value of the machinery which had had to be broken up had amounted to only £392. No depreciation had been written off, first because all the machinery was new and, in the second place, in regard to those machines which were defective or unsuitable, claims had been made on the suppliers. He had told them the worst that could be said about the company. A great change for the better had been made within the last three or four months in the mechanical management, by which they had been enabled to introduce economies which had very materially changed the complexion of their accounts. They had only within the last few months overcome the difficulties to be expected in the application of the process on a large scale. They had now produced 100 tons of copper, and they had orders on their books for 30 tons more, many of them being repeat orders. Their policy for the future was to prove to other manufacturers the superiority and cheapness of the company's process, and, without entering into irritating competition with them, to sell them the patents for a lump sum or for a fixed royalty. He concluded by moving the adoption of the report. Mr. H. B. Fulton seconded the motion, which was adopted.

THE DALMENY OIL CO., LTD.—The annual meeting of shareholders of the Dalmeny Oil Co., Ltd., was held recently at 21, Charlotte-square, Edinburgh, Mr. Roberts presiding. The report, which has appeared in our columns, was submitted, and on the motion of the Chairman, which was seconded by Mr. Burn Murdoch, was approved, and it was resolved to pay a dividend of 5 per cent. per annum on the preference and ordinary shares, and of the balance of £2,844. to place £2,500. to credit of new retorts, carrying forward the remaining £344. Mr. Burn Murdoch was re-elected a director.

THE NEW BORAX COMPANY.—The New Borax Company which is to be issued to the public shortly is to have a total capital of £2,400,000. Of this sum £2,100,000. is to go to the vendor, Mr. L. H. De Friese, a New York solicitor, with whom the Indian and General Investment Trust, Ltd, is associated in the promotion. Sir Alexander Wilson, of the Mercantile Bank of India, and the Hon. H. A. Lawrence, of the Imperial Ottoman Bank, will be the principal directors. The first issue will be £800,000. debenture stock and £800,000. preference shares. The prospectus must, under the terms of the contracts, be issued this month.

THE NEW STEEL WORKS ON THE TEES.

ANENT these works referred to last week, it is proposed to erect in immediate proximity to the blast furnaces at Port Clarence steel works equipped with the latest machinery for the manufacture of finished steel for shipbuilding and other purposes at an estimated cost of £300,000. The Commissioners may lose some portion of their import dues on hematite ore, but the manufacture of steel from the pig iron made in the district will make a very great difference to the population on the banks of the Tees; it means local industry as compared with foreign industry. If the shipbuilders can get plates made from Cleveland iron of excellent quality and at a cheaper rate, then they have a very great prospect before them in Cleveland and on the banks of the Tees, which is one of the best rivers for shipbuilders in the kingdom.

In the opinion of some it is believed that this year will be a turning point in the history of the Tees, and it had always been thought that some day, sooner or later, the river Tees would take as high a position commercially as the Tyne. Looking to the new railway, we may hope to see new works springing up, and the industries which were now flourishing, largely developed. The Moor and the Malleable Ironworks at Stockton might feel that their interests would suffer, but if it is a fact that steel can be made from Cleveland pig iron there is not the slightest doubt that the men at the head of those works would set about making steel from the local ore, and would thereby help to improve the condition of affairs at Stockton.

INDUSTRIAL REVIEWS OF 1898.

Chemicals in the North.—During the year the trade in chemicals shows a falling off both in quantities and prices. This refers specially to the heavier articles, such as bleaching powder, alkalies, &c., in which Continental countries have come to the front and are competing for the export trade. So far the home trade has been pretty well retained, the item of carriage on such cheap articles being against their importation, but as the textile and paper trades have been quiet, there has been no compensating increase in the home consumption.

Ammonia soda has maintained its price, owing to combination among the manufacturers, but both caustic soda and bleaching powder have fallen, the latter on an average about 30s. per ton. The electrolytical process is mainly responsible for the drop, causing keener competition for a more limited trade. America is still our best market for this class of chemicals.

Chlorates of potash and soda were much depressed for a considerable part of the year, prices being as low as 3d. and 3½d. respectively, but owing to an arrangement between home and foreign manufacturers they are now 3¾d. and 4¼d., with a fair demand.

Borax was as low as £13. during the first half of the year, but as the raw material dropped in proportion manufacturers still had a small margin. Demand also fell off considerably for some time. A few months ago a change for the better set in, the raw material being gradually forced up and borax advancing proportionately, so that consumers purchased more freely, and latterly there has been a large business doing and the price of borax is now £16., with the prospect of a further advance.

Bichromates of potash and soda have gone from bad to worse, both in quantities and prices. So far our home manufacturers have been able to keep their hold of our home market, but export business has fallen off considerably. The continued increase of Continental works has cut into our export trade, and new works supply consumers who formerly bought in this country, and as in most cases duty is against them, besides long carriages, it is not surprising that our home manufacturers are ousted. Now there is a surplus production from the other side which can be sold at cost, and our home producers have this to compete with.

There has been less doing in sulphate of copper during the year. The price of this article has considerably advanced owing to the firm position of copper, and this may account for the falling off in sales. Price, however, continues to advance.

Chemical manures, such as sulphate of ammonia, &c, have had a good year, there being a considerable increase both in quantity and price. The speculative element is a feature of this trade, but such manufacturers as did not contract early should have a considerable margin in their favour, and the market is still firm. Carbonate of ammonia has been low in price, but a good business doing. Manufacturers expect to realise better prices in the near future. Tar products have also been very low, and little doing; but this branch also looks forward to an improvement.

Cyanide and prussiate of potash manufacturers have had a fair year, the demand being good, and prices well maintained, and likely to go higher.

Lead products have not fluctuated to any great extent, notwithstanding the changes in pig lead, but a fairly good business has been done, and the outlook ahead is better.

The wood distilling industry is gradually falling off, both in production and prices. With the exception of charcoal and acetic acid, for which good prices have been obtained, there is little to encourage manufacturers to go on, and the tendency is towards still further curtailment of production.

The demand for sulphuric, nitric, muriatic acids has been steady, with little fluctuation in prices, which allow a fair margin to producers.

To illustrate the foregoing, we subjoin comparative prices of a few articles:—

	Jan., 1898.		Dec., 1898.	
Caustic soda (70%)	£7 10 0	..	£6 17 6	per ton.
Ammonia alkali	4 0 0	..	4 0 0	,,
Bleaching powder	6 5 0	..	4 12 6	,,
Borax	14 10 0	..	16 0 0	,,
Bichromate of potash	0 0 4	..	0 0 3½	per lb.
Chlorate of potash	0 0 3¾	..	0 0 3¾	,,
Sulphate of copper	15 15 0	..	19 0 0	per ton.
Sulphate of ammonia	8 17 6	..	10 0 0	,,
Prussiate of potash	0 0 6	..	0 0 7	per lb.
Charcoal	2 0 0	..	3 0 0	per ton.
Acetic acid	8 0 0	..	9 0 0	,,

Fire Bricks.—The fire-brick trade has had an exceptionally brisk year, especially in the last six months. The local steel and iron works have been making large demands, and the export trade to France, Russia, Belgium, Germany, and also to Canada, San Francisco, and other ports has been fully maintained at increased values. While the prices to purchasers are considerably higher than a year ago, the manufacturers have not been receiving the fullest benefit, as since the strike of colliers in South Wales the price of fuel has gone up by leaps and bounds; and, in addition to this, miners and others had their wages increased. These two items figure largely in the cost of manufacture.

There appears to be a bright prospect before this trade for another year, especially in the West of Scotland, the principal works having to refuse orders, being unable to promise delivery within a reasonable time. It should be added that manufacturers have suffered considerably by reason of the railway companies being unable to carry the traffic; disorganisation has been constant, and it would be well if managers and directors would at once vigorously face the question.

Pig Lead.—A fair business has been done in this item during the year. The year began with pig lead at £12. 17s. 6d. per ton, but as the troubles of Spain grew deeper, and the difficulty of arranging freight outward for its large lead production became greater, prices advanced until in April they touched £14. 15s. From this point they gradually receded again to £12. 17s. 6d., but have since recovered, and good, soft pig lead may now be quoted at £13. 5s. Manufactured lead has, of course, closely followed the variations of the metal, and sheets and pipes leave off say at £14. 15s. per ton for the former and £15. 5s. per ton for the latter.

Red and White Lead.—The demand has been good, and prices consequently have been well maintained. A notable feature of the year has been the collapse of the so-called White Lead Company, after losing a very large amount of its shareholders' money. This *denouement* has been long anticipated by those who know what white lead really is. It would seem, however, to require quite a series of hard experiences to educate the public on the point. White lead leaves off, dry, say, £18. 5s. per ton; paint, £19. 10s. per ton; red lead, £15. 15s. per ton.

Soap.—The movement of prices in the first half of the past year was upwards, the leading soaps rising by £1. per ton in January, and by another £1. per ton in June. This movement was accompanied by a considerable advance in the prices of raw materals, as the following quotations from price-lists will show:—

	January.	May.	December.
Tallow	22s. 6d.	25s. 0d.	23s. 3d.
Palm oil	18s. 6d.	21s. 3d.	19s. 0d.
Cotton oil	13s. 0d.	15s 9d.	13s. 3d.
Cocoanut oil	21s. 0d.	24s. 6d.	25s. 6d.
Maize oil	13s. 6d.	16s. 6d.	16s. 6d.
F. rosin	4s. 3d.	5s. 6d.	5s. 0d.
W. W. rosin	6s. 9d.	7s. 6d.	8s. 0d.

On the 30th November the stock of tallow in London was 24,888 packages, against 34,613 packages in 1897; and the shipments from Australia in November were 3,062 tons, against 4,300 tons the previous month. The state of the supply of this leading raw material for soap manufacture is at present such that firmness, if not an advance, is to be anticipated in the immediate future.

The year just drawn to a close has been a prosperous one. There has been less cutting of prices to unremunerative points than has been usual for many years back. This improvement appears to be due to the prosperous state of general trade in the country, resulting from the greater firmness of prices and the consequent more profitable nature of business.

BRITISH TRADE AND THE BOARD OF TRADE.

THE OUTLOOK.

SPEAKING at Leicester, recently, Mr. Bryce, M.P., said the Board of Trade had always felt it a great benefit to be able to get into touch with the commercial community throughout the whole of Great Britain, and he felt grateful to them for remembering even those who, having tried to do their best during their short spell of power, had now passed into what was called the cold, but what was also the leisurely and pleasant, shade of Opposition, but who, he hoped, had not on that account lost in the smallest degree their interest and sympathy with the development of British commerce. It had never been his good fortune to be in any way connected with commerce. He had not even been a director of a joint stock company. But he had endeavoured to fit himself for the duties which fell upon him by foreign travel. He took the toast (to which he was speaking) to be really "British commerce," and they would expect him to say something about that subject. To judge from the last returns, during the 11 months of that year there has been some diminution as compared with the 11 months of the previous year. Their exports were down by £2,500,000. That was not serious, because the diminution was in one branch—namely, the woollen industry, and that was accounted for by the rush of exports in 1897 to the United States in order to get goods in before the Dingley tariff came into operation. The warehouses of America were stocked with British goods prior to that tariff's coming into operation, and he had no doubt the English goods were being sold in the States now. Apart from that he saw no reason to suppose that the trade revival beginning in 1895 was being seriously checked. A great deal depended upon the course of foreign politics, but he saw no cause to apprehend danger from that source.

PROSPECTS OF NEW MARKETS.

Could they expect to open any considerable new markets? He was not very sanguine on that point, except in one direction. If they succeeded in obtaining their full share of the trade of China, they might expect an increasing market there, but in other parts of the world he did not feel sure that any great expansion was to be expected. But what were the prospects in new countries? The victory of Omdurman was supposed by some to have opened up an important district for British trade, but he did not anticipate that for a good many years to come there would be any great demand there for British goods, because the country had been ruined by war and tyranny, because only a portion of the soil was fertile, and because the population was not an industrious one. It would have to acquire habits of industry, and trade routes would have to be opened. Years would elapse before they experienced any large demand for British manufactures. Although he did not despair of the future, a great deal would be gained if they could have a reduction of the heavy tariffs which, unfortunately for England, and unfortunately also for the foreign countries imposing them, were so great a hindrance to commerce; but he could not be sanguine on that score. They might be surprised that, after the teachings of Cobden, people should be under the delusion of protection, but the delusion was as strong as ever.

FOREIGN COMPETITION.

Nor could they effect any decrease of foreign competition. The export trade of Germany and the United States was increasing rapidly, and that of the States was developing in many important lines of business in which they might have expected England to continue to hold her own against any country. In the production of electrical plant the Americans were taking the lead, and they had recently taken large contracts for rails for the East Indies because they could produce them at a cheaper rate than we could. He found that between 1891 and 1897 Germany increased her export trade by £21,000,000., the United States increased theirs in the same period by £31,000,000, while the export trade of Great Britain fell off by £15 000,000. sterling. He did not say that those were alarming figures, but they did cause food for reflection. Of course there were some deductions to be made. A great deal of their capital was invested in shipping, which did not appear in their export trade, and there were investments in foreign countries, many of which produced an excellent return, but at the same time there was food for reflection when they saw that their powerful competitors had increased during these years while their own export trade had fallen off. What was the explanation? The Blue-book recently published containing reports of our Consuls and attachés bore upon that point. The critics who reported in that book said that our people showed a want of adaptibility in dealing with foreign markets in that they would not make precisely the kind of goods that the foreign consumer wanted, that they refused to take small orders, to make cheap goods, or to meet customers in matters of detail. They complained of the want of British commercial travellers, and that so many English travellers could not speak the language of the country to which they went. What use could such men be? The critics went on to say that there were many small things in which the Germans would take trouble where the Englishmen would not. The Englishmen would not quote prices in the currency of the country in which the goods were to be sold. The critics also bore testimony to the disadvantage of our system of weights and measure compared with the metric system. He was glad to know that the Leicester Chamber of Commerce took an interest in that question. An Act of Parliament had been passed on that subject, but it would be a great advantage if they could go further. When they saw how close an attention to details was paid by young Germans in business, he could not help thinking that if young Englishmen would give more of their minds to business it would be better. No one wished to make life less pleasant, and they desired young fellows to have exercise, but if their minds were to be so entirely bent, out of hours of business, on sport and amusement, it would be impossible for them in hours of business to bring all the resources of their minds to bear upon their work as the young German did.

INDUSTRIAL DISPUTES.

Then there was no doubt that industrial disputes had the effect of diverting trade to other countries. (Hear, hear.) They must expect that disputes would arise, for they could not expect either party in the industrial world to go on without desiring to improve their own interest. There were generally faults on both sides, but the question was whether means could not be found to prevent or abridge the quarrels. There was a Conciliation Act in operation, but it was contended that that Act should go further and be made compulsory. There were great difficulties in the way of compulsory arbitration. He did not care to use the word impossible in connection with the subject when they had to learn so much in their lives, but the powers conferred by that Act had never yet been put fully in force. He regretted that the Board of Trade had not, during the last two or three years, put the law more fully in force. The Board of Trade should whenever possible order inquiries and appoint arbitrators, so that public opinion might be enlisted in support of a compromise suggested for the ending of strife. Mr. Bryce went on to speak of the relations of Chambers of Commerce with the Board of Trade, and in conclusion argued that steps should be taken to reduce the ruinous expenditure upon armaments now going on throughout Europe. The Tsar's rescript should be hailed with pleasure and gratitude, and every means should be taken to press forward the great cause which that manifesto advocated.

BACTERIAL CONSTITUENTS OF SOILS.

INFLUENCE ON WATER SUPPLIES AND ANALYSIS.

AMONG the auxiliary scientific investigations included in Sir Richard Thorne Thorne's Supplement to the twenty-seventh annual Report of the Local Government Board, just issued, an account is given of the chemical and bacteriological constituents of different soils. Dr. Houston has conducted an exhaustive inquiry into this subject, and Dr. Sidney Martin has continued his own researches into the presence of the typhoid bacillus in soil previously sterilised. The latter investigator found, as in his former observations, that some soils were *prima facie* favourable and others unfavourable to the growth of the bacillus. Soils obviously polluted with animal organic matter sustained, while virgin soils proved hostile to, the life processes of the microbe. Virgin soils were hostile, in the above sense, whether or not they contained abundance of vegetable organic matter. In a particular experiment with sterile organically polluted soil, the typhoid bacillus maintained its existence for 456 days, and towards the end of this period, the "soil culture" of the bacillus, after it had been dried and powdered to dust, still yielded the microbe in viable condition, and, presumably, in virulent phase. Dr. Martin's more difficult task of testing the ability of the typhoid bacillus to maintain itself in soil in which it is brought in competition with other bacteria is as yet in its initial stages, but has yielded an interesting result in one instance, in which the typhoid bacillus survived for fifty days in competition with other micro-organisms, but had not multiplied. It was, in 1882, the dictum of Sir George Buchanan, the predecessor of Sir Richard Thorne Thorne in office, that in regard to the quality of a given water, "the chemist can, in brief, tell of impurity and hazard, but not of purity and safety," that "while we must ever be on the watch for the indications that chemistry affords of contaminating matters gaining access to our waters, we must (at any rate till other methods of recognition are discovered) go beyond the laboratory for evidence of any drinking water being free from dangerous organic pollution." For this purpose, it was alleged, "we must go in search of the conditions surrounding water sources and affecting water services." On this point, the present medical officer says that, notwithstanding the aid which since 1882 has been rendered by the bacteriologist, it may be doubted whether we are yet in possession of laboratory methods for the prompt and certain recognition of uniform purity and safety of water. But it is said there can be no question at

all that in bacteriology we have a ready means of detecting contaminating matters in waters which, from the point of view of the chemist, would be classed as "of high degree of purity." Examples are given of the delicacy of bacterioscopic tests, as compared with chemical tests in detecting undesirable, if not dangerous ingredients in water. The facts are derived from a paper recording certain joint experiments by Drs. Klein and Houston. These observers added to a number of separate samples of sterile distilled water various "minimal" quantities of raw sewage, obtaining thereby sewage dilutions ranging between one in 100, and one in 20,000. Then they proceeded to test them severally, chemically and bacterioscopically. As a result of their procedures, they ascertained that while the majority of their sewage dilutions would be classed chemically as at least organically safe drinking water, they had no difficulty in detecting in each and all of them certain objectionable bacilli. They were able to identify one description of these microbes in liquid made up of only one part of crude sewage in each 500,000 parts of distilled water. Similarly, they succeeded in obtaining the same objectionable bacilli from a sample of Thames water taken below Staines.

In another part of the medical officer's supplement reference is made to cases in which oysters appeared to have been the cause of enteric fever. The report states it must now be considered demonstrated that, as long as the sewage of Brightlingsea discharges as sewage into Brightlingsea Creek, so long will material risk attend the consumption of oysters obtained from layings there. It is observed with satisfaction that the council of the recently formed urban district of that place are now bestirring themselves with the preparation of a scheme which aims at dealing with the sewage of their district in such a manner as shall obviate pollution of the oyster layings. The history of this affair is sufficiently serious. In the summer and autumn of 1897, 26 persons residing in various parts of Essex and Suffolk were seized with enteric fever. The circumstances were carefully inquired into by the medical department, and it is stated that, in view of all the facts, it seems hardly possible to doubt that in these cases infection had been conveyed by Brightlingsea oysters. It happens that the danger had been pointed out by Dr. Bulstrode in 1895, after surveying the Creek. In addition to these cases, reports by medical officers and others have put on record a number of instances along the coast of England and Wales where a coincidence has been found between the date upon which the infection of enteric fever was presumably contracted and the date upon which uncooked oysters had been consumed by the sufferers. In certain of these instances, where no other source of infection than oysters could be heard of, the oysters implicated were traceable to layings or places of storage known to be exposed to pollution by sewage. Although this was a reasonable explanation of the several attacks, its probability was not capable of exact determination. But the investigation conducted by Dr. Buchanan, in respect to Brightlingsea, may be considered to have afforded every reasonable proof of the operating cause.

MANURE MATERIALS IN 1898.

MINERAL PHOSPHATES.—Continental manufacturers laid themselves out for a largely increased demand for superphosphates for the 1898 Spring season, but their estimates were very much under the mark, as was evidenced by the heavy drain upon English production. Clearly the Continental consumption has increased enormously, and, realising this, manufacturers there have put forward their utmost efforts to meet the demand. During the past six months they have been the keenest buyers of all descriptions of rock, and especially of high grade, which they have bought right up to 1,900 shipment at extreme prices. The advanced prices have not, however, altogether found their way into the pockets of the raisers. So far the shipowner has had the lion's share, and he seems likely to have for some time to come. United Kingdom manufacturers have bought fairly well for 1899 shipment, but they have rather held back, hoping that reduced freights later might afford a better opportunity. So far as high grade rock is concerned, their policy has probably been mistaken, more than half of the Florida mines formerly working being now closed.

The value of 75/80 per cent. Florida rock at the end of June was 6½d. per unit, 1899 shipment, c.i.f. to good U.K. ports. At the close of the year it is about 8d. per unit. Tennessee rock does not find so much favour with U.K. and Continental buyers, and 78/80 per cent. may be had at 1d. to 1¼d. per unit below the price of Florida. Algerian, 58/63 per cent., is quoted 6½d. per unit, and 63/70 per cent., 6¾d. per unit, the bulk of the output for 1899 being already sold, and raisers being indifferent about committing themselves further. South Carolina rock, which is not so fully sold, is offered at 6d. per unit.

SUPERPHOSPHATES.—The increased export demand for superphosphates over the spring months has been sustained through autumn, and although manufacturers have had to compete with Belgian production, they have been able to obtain substantially advanced prices. This will, no doubt, strengthen their hands in dealing with the resistance to higher prices which they are certain to meet with amongst home consumers.

BONES AND BONE MEAL.—River Plate cargoes of bones have been very scarce, and full prices have been paid for any offering, up to about £4 15s. per ton, delivered good U.K. ports. At the close there would be buyers at an advance. The imports of crushed East Indian bones have been almost *nil*, and the quotations have been nominal. East Indian bone meal has been much sought after, and prices have advanced from £4 7s. 6d. per ton in July to £5 2s. 6d. per ton in December, a further advance being required at the close.

NITRATE OF SODA.—Notwithstanding that up to November it seemed probable that there would, at the end of December, be a shortage in visible supply, as compared with the same date in 1897, there has not at any time been a serious improvement in prices. At the close of the year there is an actual increase in the visible supply of some 60,000 tons, but it is estimated that the quantity in the interior on the Continent (not included in visible supply) is fully 50,000 tons less than it was at the end of 1897, so that there is no increase in actual supply for the coming season, and consequently no room for increased consumption. It will be remembered that at one time last season there was an actual dearth of supplies at some of the Continental ports. And yet consumers for the most part look on with equanimity, and there is not that improvement in values which the situation would seem to justify. Efforts have been made to reconstitute the Combination of Producers, but so far there seems to be no prospect of agreement.

Spot quotations since June have fluctuated between 7s. 6d. and 7s 9d. per cwt., and the closing prices are 7s. 7½d. per cwt. for good, and 7s. 9d. per cwt. for refined quality.

SULPHATE OF AMMONIA.—Our estimate of the situation at the end of June proved to be correct. Demand has been fully equal to the supply, and, with the exception of a set-back in October, when speculators were busy manipulating the market and consumers abroad were postponing their purchasing, prices have steadily advanced, the value f.o b. Hull at the close of the year being £10. 2s. 6d. per ton—17s. 6d. per ton above that at the end of June.

There has been good demand from Spain and the Colonies all along, and within the past two months German and Belgian buyers have been to the front, so that the year has again closed with bare stocks. A large business has also recently been done in London and Scotland, January-March and January-June delivery, at present spot prices at those points, and a premium is now required. Prospects seem to favour at least the present level of prices for some months to come, for, although the price is high in relation to nitrate of soda, there is no stock to fall back upon to meet any exceptional demand. Besides the chances are that nitrate of soda will improve, given an early season, and in that case the value of sulphate of ammonia may even advance further.

MISCELLANEOUS NITROGENOUS MATERIAL continues to be scarce and dear. Ordinary River Plate dried blood has sold readily at up to 9s 4½d. per unit ex quay, and home-prepared has been in demand at up to 10s. 6d per unit, f o b. Liverpool. At the close there is nothing offering but American-prepared, at 9s. 6d. per unit, nett cash, c i.f. Liverpool, American sampling and test, but these terms do not attract buyers.

THE RUSSIAN IRON INDUSTRY.

THE United States Consul-General at St. Petersburg gives in a recent report some interesting details of the growth of Russia as an iron-producing country. Ten years ago she took the seventh place in this respect amongst the countries of the world; in 1897 her place was fifth, as in the meantime her production had become greater than that of either Austria-Hungary or Belgium. In that year Russia produced 2,043,000 tons of iron, and in the last ten years tripled her production—a proportionate increase which it took Germany 12, Great Britain 22, and the United States 23 years to accomplish. The quality of Russian iron is inferior, but this is due to primitive methods, to the slow development of the iron manufacturing industry, and to the limited railway accommodation, which has retarded all Russian industries. The development of the industry in the southern provinces and in the Urals has been greater than elsewhere, but quite lately there have been more enterprise and activity everywhere. In the Kertch Peninsula and on the Black Sea, at Rostoff on the Don, and even in Northern Russia in the Olonetsk district foundries and furnaces are being erected and worked. The existing foundries have earned large dividends, and accordingly new ones are being started wherever there are iron deposits. Between 1888 and 1893 the production of iron increased by an annual average of 99,000 tons; in 1894 the increase was 162,000; and in 1897 270,000 tons. Consequently there was a considerable decrease in the importation of pig iron, but an increase in that of manufactured iron and steel. In parts of Southern Russia ore is becoming scarce, as the deposits are being exhausted. The demands of Siberia for Ural iron are constantly increasing; Ekaterinburg is the chief market, and the Volga basin also takes large quantities from the same source. The consumption in the Caucasus also is largely increasing, owing to the development of the petroleum industry.

JAVA INDIGO IN 1898.

THE prices of Java indigo, although they were already very low in the beginning of 1898, still underwent a further considerable decline, and are now below those for other sorts of indigo In consequence thereof trade has been very active during the past few months, particularly for low middling to middling qualities. Latterly also the better qualities, owing to their being very cheap as compared with the other qualities, began to command more attention. Consumption has been good during the past year, the London stocks having decreased from 16,500 to 10,600 chests, whereas for January auction only 3,000 chests have been declared, against 8,000 chests in the past year.

Prompt and comparative values are as follows:—

	JAN. 1899.	JAN. 1898.	JAN. 1897.	JAN. 1896.
Ordinary.....	2/3 - 2/10	3/2 - 4/-	4/- - 4/9	4/8 - 5/-
Middling	2/11- 3/2	4/2 - 4/6	4/10- 5/1	5/2 - 5/6
Good middling.	3/2 - 3/6	4/7 - 4/9	5/2 - 5/6	5/7 - 6/-
Fine	3/6 - 4/-	4/11- 5/2	5/7 - 6/-	6/1 - 6/7
Superior	4/2 - 4/10	no stock	6/1 - 6/7	6/8 - 7/-

per pound, c.i.f. U.K. or U.S. of America, less 1% discount.

The production of the last crop has been about 930 tons,

against 811 ,, .. in 1897
,, 680 ,, .. ,, 1896
,, 604 ,, .. ,, 1895
,, 495 ,, .. ,, 1894
,, 632 ,, .. ,, 1893
,, 638 ,, .. ,, 1892
,, 711 ,, .. ,, 1891

The following is a summary of Stocks:—

HOLLAND.	1898.	1897.	1896.	1895.	1894.	1893.	1892.	
Imports	9503	9242	5998	5192	4934	6700	6717	Chests.
Deliveries	8417	8032	4402	5314	4631	6537	11033	
Stock 31st Dec...	4806	3720	2510	914	1036	728	565	

Trade Notes.

THE MANCHESTER SEWAGE INQUIRY.—An inquiry into the proposals of the Manchester Corporation with regard to the adoption of the septic system of sewage treatment was opened on Thursday. Much expert evidence was heard, but the inquiry finally stood adjourned until Monday, the 23rd inst.

SUBSIDENCE OF FOREIGN SALT MINES.—Reports from Cracow state that two of the largest salt mines at Wieliczka will have to be filled up, owing to the danger of their falling in, and thus endangering churches and other buildings.

SALTPETRE FIRE AT HAMBURG.—An extensive fire broke out at a saltpetre factory at Hamburg on Sunday. The factory is a large building of three storeys. The total loss amounts to half a million marks, and is covered by insurance, three-fifths of the amount being placed with English companies.

CONVERSION OF ANOTHER RUSSIAN OIL CO.—The naphtha firm of A. Mantaschew and Co. is about to be transformed into a limited liability company, with a capital of 20,000,000 roubles, through the intermediary of the Russian Bank for Foreign Trade, together with a syndicate of St. Petersburg financiers.

CONSUMPTION OF GAS IN MANCHESTER.—From figures which have been prepared it appears that the consumption of gas in the area of the Manchester gas supply during the last nine months of 1898 was larger than in any similar preceding period in the history of the undertaking. The gas consumed during the nine months was 3,005,907,000 feet, an increase of 7·56 per cent. over the corresponding period of 1897, and of 19·92 per cent. as compared with 1895. The figures show an average annual increase since 1895 of 6·64 per cent. The record day's consumption was on December 21st, when 25,820,000 cubic feet were used.

DIRECTORIES AND CATALOGUES.—*Paper Mill Directory* for 1899. Thirty-ninth annual edition. London: Sold by Simpkin, Marshall, Hamilton, Kent, and Co., Ltd. 2s. 6d. Contains the usual useful information about the different paper mills in the United Kingdom, together with the allied trades.—*A Catalogue of Books and Papers on Chemistry and Physics*, offered for sale at net prices by Dunlau and Co., 37, Soho-square, London, W. Contains 200 pages, in which will be found a list of works by chemists of all nationalities from the early part of the last century to the present time. Lists of other scientific works may be had on application.

AMERICAN RUBBER TRUST.—A combination of the rubber manufacturers and distributors of Trenton, New Jersey, has been formed with a capital of 5,000,000 dols. Six companies are included.

THE RESIN MARKET.—The fluctuations in prices were very slight during the past month. Shippers hold common and low mediums firmly at recent quotations, and the prospects seem to be in favour of an advance of prices this year. The receipts in Wilmington since April last show a decrease of about 2 per cent., and the exports thence an increase of about 34 per cent.; the stock at the end of November was 36,703 barrels, as against 52,903 at the corresponding date in 1897. The receipts in Savannah show a decrease of half of 1 per cent., the exports thence a decrease of 13½ per cent. (or 104,404 barrels), and the stock was 268,544 barrels, as against 262,847 barrels in 1897. Wilmington is the market chiefly for common resin, and Savannah for mediums and pales. The London market has been dull latterly, but supplies of all qualities are well held. Demand at Liverpool has continued steady with a fair business, and the prices of all grades are fully maintained.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols remain nominally at 9d. for 90's and 50/90's in a quiet market. Carbolic acids are in fairly good demand both for crude and crystals Naphthas are steady as a whole without change in values. Creosote firm. Pitch steady at 24s. 6d East Coast, with a more encouraging outlook.

Sulphate of ammonia has made a great advance in price this week. The forward market is strong and buyers pressing, quotations being £10. 10s. January/June at Leith. Closing prompt values are:—London outside makes, £10 5s to £10. 6s. 3d.; Liverpool, £10.7s 6d.; Hull, £10. 6s 3d. to £10. 7s. 6d.; Leith, £10. 8s. 9d. Nitrate steady.

MISCELLANEOUS CHEMICAL MARKET.

Trade generally continues brisk in heavy chemicals. Buyers have more apparent confidence, and orders are more freely placed, with the result that there is a tendency in values to rise from the extremely low point which they have touched. Caustic soda is firmer for prompt delivery, though nominal quotations are as last reported, viz., f.o.b. Liverpool, 77 % £7. 12s. 6d, 74 % £7. 7s. 6d., 70 % £6. 17s. 6d., 60% £5. 17s 6d. nett per ton. Ammonia alkali steady at convention price of £4. 2s. 6d., bags, f.o.r. makers' works. Bleaching powder is in more active request both for home trade and export, and the quotation is £4 7s. 6d. to £4. 10s. softwoods, f.o.r. makers' works, and £5. 5s. per ton, hardwoods, f.o.b. Chlorates are without change in position. Soda crystals are dearer at £2. 10s., bags, f.o.r. makers' works. Saltcake has had a further advance, and business has been done at 28s. 6d. to 30s. in bulk, f.o.r. Lancashire and Cheshire works. For muriatic acid and vitriol the demand is generally still maintained. Borax is dearer at £16., f.o.r. Potash, caustic and carbonate, are moving freely, and quotations are steady. Prussiate of potash and soda are inclined to further advance. Permanganate does not improve. Sulphate of copper has further advanced to £19. 15s f.o.b, prompt, and £20. to £20. 5s. for spring shipments. Lead salts are firm. Zinc and tin salts are dearer. Acetate of lime, brown, is well maintained at £5. 7s 6d. to £5. 10s., ex quay or rail; Grey acetate of lime dearer at £7. 15s. to £8. ex warehouse. Acetate of soda is selling more freely at £12. 10s. ex ship. For white powdered arsenic there has been active demand and price for best brands is to-day £16. 10s. to £17. f.o.r., Garston. Glycerine is firmer. Tartaric acid, 11¾d. to 1s. per lb. Oxalic acid 3d. per lb. For sulphocyanides the demand is quiet. Prices continue to rule low for aniline oil and salt, and in the textile trades there is, as yet, no marked improvement in the general demand for chemicals.

REPORT ON MANURE MATERIAL.

Manure manufacturers, being fully occupied in preparing manures for the coming season, are not just now giving much attention to buying mineral phosphates, but there has been decidedly more inquiry for nitrogenous material. Quotations for mineral phosphates are unchanged, and no more important business has transpired. In the absence of River Plate bones offering, there is no business to report. Parcels of common grinding bones, arrived in Liverpool, have readily sold at £4. 13s. 9d. to £4. 17s. 6d. per ton, ex quay. For East Indian bone meal there is good inquiry, and £5. 7s. 6d. per ton has been paid for Bombay. For Karachi bone meal, February-March steamer shipment, the value is about £5. 5s. per ton. Nitrate of soda is firm at 7s. 7½d. per cwt. for good up to 7s. 9d. per cwt. for refined quality.

THE METAL MARKETS.

LONDON, WEDNESDAY.—Pig iron firm: Scotch warrants closed at 50s. 10d.; Middlesbrough, 45s. 10d. cash; and hematite, 58s. 3½d. Copper steady: Chili bars, G. O. B.'s and G. M. B.'s, closed at £60. 8s. 9d. to £60. 13s. 9d. cash, and £60. 15s. to £61. three months. Tin firm: Straits closed at £98. 5s. 0d. to £98. 15s. 0d. cash, and £98. 15s. to £99. 5s. 0d. three months; Australian, £98. 15s. 0d.; English ingots, £101. 10s. to £102. Lead steady: Spanish, £13. 11s. 3d.; English, £13. 15s.; Silesian spelter, ordinary, £24. 12s. 6d. Nickel, 1s. 2½d. Antimony, £36. 15s. Quicksilver: First hands, £8. 0s.; second hands, £7. 19s. *Copper shares* steady: Cape, 5 1/16 to 5 3/16; Copiapo, 2 13/16 to 2 15/16; Libiola, 2⅛ to 2⅜; Mason and Barry, 3⅜ to 3⅝; Rio Tinto, 32¾ to 32⅞; Tharsis, 7¾ to 8.

GLASGOW, WEDNESDAY.—Market easier, and a fair business. Scotch done at 50s. 11½d. to 50s. 10d. cash; also at 51s. 2d., 51s. 0½d., 51s. 1½d., and 51s. 1d. month; buyers, 50s. 10d. cash; sellers ½d. dearer. Cleveland done at 45s. 11½d. cash, and 46s. 2d. to 46s. 1½d. month; buyers, 45s. 10d. cash; sellers, ½d. more. Cumberland hematite done at 58s. 5½d. to 58s. 4d. cash; buyers, 58s. 3½d. cash; sellers, 58s. 4d. Middlesbrough hematite idle.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

OILS.—Palm oil is scarce, the offerings being light, and prices are firm in consequence, but sales have been few. Olive is steady at £29. 10s. for Seville, and £30. per tun for Malaga. Linseed firm and advancing, closing value being 18s. 6d. to 19s. per cwt. for Liverpool makes in export casks. Cottonseed is well held at 15s. 6d. to 16s. per cwt. for Liverpool refined. Castor oil firm. There is no good seconds Calcutta offering for forward; spot value is steady at 2⅞d. First pressure French unchanged. Tallow strong and scarce so that recent full prices are well maintained. Resin is in fair request; there is no change in prices so far. Spirits of turpentine firm, at 33s. per cwt. on spot, with a moderate inquiry. Petroleum steady, with American at 6⅝d. to 8d., and Russian refined 6d. per gallon.

CAKES.—Owing to arrivals of American Western linseed, the market is rather easier, but with a good business concluded at £6. 18s. 9d. holders are firmer to deal with at the close, £7. being now the lowest on the spot, with Bombay still quoted at £7 5s., but River Plate are now held for £7. 7s. 6d. to £7. 10s. per ton, usual terms, and Russian for £7. 10s. to £7. 12s. 6d. per ton, net cash. Liverpool makes continue in very fair request, and previous full prices are well maintained at £8. to £8. 15s per ton, according to brand. Good to choice brands of American decorticated cottonseed continue to have a good market, holders being exceedingly steady at £5. 17s. 6d. to £6 2s 6d., according to quality, with a good trade doing thereat, Liverpool makes selling freely at fully previous prices, viz., £6. 10s. to £6. 15s. per ton, according to brand. Partially 5s. more money is wanted for undecorticated Liverpool makes, a very good demand being experienced at the higher range of values now quoted, viz., £4. 15s. to £5 per ton, according to brand. The market is now bare of supplies of prime quality Egyptian on the spot, and the quotation is nominally raised 2s 6d. to £4. 12s. 6d.

COLOURS.—Prices are steady, and practically without change. Ochres: Oxfordshire—common £10., medium £12, best £15.; Derbyshire—common 40s., medium 50s., best 60s.; Welsh—best 90s.; seconds, 50s., and common, 18s.; Devonshire, 40s. to 45s.; French, J.C., 65s. Umber: 40s. to 45s. White lead: £16. Red lead unchanged. Venetian red: £6. to £10. Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7.; medium, £10.; finest, £20. Zinc oxide: £22. 10s. to £25.;

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—Business here may be described as fair, yet leaving room for considerable improvement. The total tonnage entering the docks during the past year shows a considerable increase on the preceding year. The rule has been in this port for one fat year and one lean; the past year has been the fat one, with an increase of 417,982 tons, the relative totals of the two dock systems being:—North Eastern Railway, 2,603,317 tons, against the previous year, 2,405,832 tons; Hull and Barnsley Railway, 1,330,685 tons, against 1,110,188 tons. Some rumours are current of a possible 3 to 3½ % dividend for the Hull and Barnsley shareholders. Linseed oil, in sympathy with seed, is firmer, being quoted 16s. per cwt. spot naked; same for month; 16s. 1½d. to August; refined and boiled, £1. to £1. 10s. per ton extra. Refined cotton oil 13s. 0d. naked spot, 13s. 3d. to April, and 13s. 9d. May to August; crude ditto, 11s 10½d. to 12s. 1½d. April; filtered kinds average £1. to £1. 5s. per ton extra. Barrels, £1. 10s. and ordinary casks, £1. per ton extra. Castor oil, extracted here, pure pharmaceutical cold drawn, 29s. per cwt. in barrels; 3¼d. per lb. in cases; first pressure, 27s. in barrels; second pressure, 26s in barrels. Turpentine 33s. to 33s. 3d. per cwt. Olive oil, £31. to £33. per tun. Olive oil soap £16. to £18 per ton. Oleines, £17. to £19. per ton. Resins firm and unchanged. Cod *oil quiet, £16. to £18.* per ton.

CAKES.—The market here for feeding stuffs is a firm one, both linseed and cotton cakes being dearer by 2s. 6d. per ton, the quotations being: Linseed cakes, 95% pure, £8. 5s to £8. 7s. 6d. per ton. Oilcakes (linseed), £7. 2s. 6d. to £7. 5s.; Russians, £7. 10s to £7. 12s. 6d. Cotton cakes: best makes, £4. 17s. 6d. to £5.; seconds, £4. 15s. to £4. 17s. 6d.; decorticated, £6. 10s. Rape cakes: Black Sea, £4. 2s. 6d.; East Indian, £5. 2s. 6d. to £5. 5s.

PAINTS.—The year opens slowly, travellers are only just getting back to their regular journeys. Rumour credits a firm here with opening out a branch of manufacture for paints in Canada. Prices are unaltered.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

It is only now that business is being resumed in full earnest after the distraction of the New Year advent. Market transactions have been resumed with, apparently, a little less of the listlessness so long prevailing. This is as regards the market in chemicals generally, but perhaps it is simply due to a temporary call so as to make up for the several days of entire stoppage. The stronger feeling in sulphate of ammonia has survived the turn of the year, and is now still more clearly perceptible. There is not much passing, but the sellers are very firm, and the most of them (possibly the whole of them) stand for £10. 7s. 6d. spot, Leith, which figure has already been paid in one or two instances. Sulphate of copper is again dearer, as is also saltcake. Bleaching powder on the other hand is rather to the losing side. Mineral oils and paraffins continue for the most part active, at values lately ruling.

Chief prices current are:—Soda crystals, £2. 7s. 6d. to £2. 12s. 6d. nett, Tyne; soda ash, £4. 2s. 6d. to £4. 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 5s. to £4. 15s. nett, Glasgow; caustic soda, white, 74° £7. 7s. 6d., 70/72° £6. 17s. 6d., 60/62° £6., and cream 60/62° £6, all nett, Liverpool; bleaching powder, 35/37°, £5. 0s. nett, Tyne; saltcake, 28s. 0d.; borax, English refined, £16., and boracic acid, £26. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s., nett, Liverpool; bichromate of potash, 3½d., less 3½% for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d., less 3½% for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow); chlorate of potash, 3⅝d, less 5% Liverpool; nitrate of soda, 7s. 6d. to 7s. 9d.; sulphate of ammonia, £10. 7s. 6d. prompt f.o.b. Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £18. 15s. 0d. to £19. 5s. 0d. less 5% Liverpool; paraffin scale, hard, 1⅝d. to 1¾d. per lb., and soft 1¾d. per lb.; paraffin wax, 120° semi-refined, 2d. to 2¼d. per lb.; paraffin spirit (naphtha), 7½d. to 8d. per gal; paraffin oil (burning), No. 1, 6½d.; and crystal, 7d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 15s. to £5. 5s., 885° £5. 10s. to £6., and 890/895° £6. 5s. to £6. 10s. Week's imports of sugar at Greenock were *nil.*

TYNE CHEMICAL REPORT.

TUESDAY.

Chemicals continue quiet, exports at this time of the year being limited. Caustic soda and bleaching powder are in better demand, and prices improved somewhat. Soda crystals are steady at £2. 12s. 6d. per ton, gross weight, locally. Sulphur scarce at £4. 15s. to £5. per ton.

Bleaching powder, softs, £5. 0s. per ton, nett; do. hards, £5. 5s. per ton, nett; caustic soda, 76/77% £8. and 70% £7. 0s. per ton, nett; recovered sulphur, 2 cwt. bags, £5. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. 0d. per ton, nett; blanc fixe, £6. 10s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt is steady at 9s. 6d. per ton, f.o.b. Tees.

COALS.—In the coal trade the demand continues good, and prices are well maintained. Coke is firm, and, as there is a probability of increased consumption locally, prices are very stiff, and likely to improve. To-day's prices:—Best Northumbrian steam, 10s. to 10s. 6d. per ton; second qualities, 9s. 0d. to 9s 6d. per ton; small steam, 4s. 6d. to 4s. 9d. per ton; gas coals, 10s. to 11s. per ton; bunker coals, 8s. to 8s. 6d. per ton; household coals, 10s. to 11s. per ton; coke, 18s. to 21s. per ton.

New Companies.

Imperial S.C. Acetylene Gas Co., Ltd.—Capital £40,000., in £1. shares. This company has been formed to acquire and carry on the business of manufacturers and dealers in patent automatic acetylene gas generators and lamps, carried on by the Liver Acetylene Gas Co., Ltd., at Liverpool and elsewhere. The subscribers to the memorandum of association are:—T. G. S. Garnett, Bromley Cross, near Bolton-le-Moors, manufacturer; W. H. Kendall, Rock Park, Rock Ferry, Cheshire, insurance broker; T. Garnett, Radeclyffe, Clitheroe, spinner; R. H. Smith, 33, King-street, Manchester, banker; J. T. W. Smart, 33, King-street, Manchester, secretary; W. Stacey, 2, Molyneux-place, Liverpool, C.A.; E. McAllester, 8, Rumford-place, Liverpool, merchant.

Mellin's Glass Works, Ltd.—Capital £20,000., in £5. shares. This company has been formed to erect a glass factory in Sweden or elsewhere, and to acquire the business of glass makers, bottle makers, glass blowers, moulders, potters, china and earthenware makers, etc. The subscribers to the memorandum of association are:—A. J. Oakes, 10, Stafford-place, S.W., secretary; C. P. Grisdale, 34, Gubyon-avenue, Herne Hill, S.E., clerk; E. F. Brown, 36, Church-street, Slough, Bucks, clerk; G. A. Maull, Mellin's Food Works, Peckham, director; C. E. Parry, 91, Erlanger-road, New Cross, secretary; C. T. Woosnam, 54, Ansdell-road, Peckham, clerk; E. Squirrell, 51, Monson-road, New Cross, S.E., clerk.

Septic Tank (Foreign and Colonial) Synd., Ltd.—Capital £60,000., in £1. shares. This company has been formed to adopt an agreement with D. Cameron, F. Commin, and A. J. Martin, and to acquire, develop, work, and deal with the foreign and colonial letters patent relating to the disposal of sewage on the septic tank system. The subscribers to the memorandum of association are:—T. C. Milton, 265, High-street, Exeter, chemist; R. Hooker, 39, Prospect Park, Exeter, gentleman; F. D. Wilson, 12, Blackall-road, Exeter, timber merchant; N. A. Mackie, 28, Unlon-road, Exeter, clerk; P. C. R. Martin, 16, Bedford-circus, Exeter, stockbroker; J. H. Baker, Elmside, Exeter, accountant; W. T. Dean, 25, Iddesleigh-road, Exeter, accountant.

Acetylite, Ltd.—Capital £10,000., in 8,5000 A and 1,500 B shares of £1. each. This company has been formed to adopt an agreement with A. M. Chance, G. Salter, and T. H. Kendrick for the acquirement of certain patents relating to the manufacture of acetylene gas and generators, and the business carried on by them at 400, New John-street, Birmingham, and to manufacture and deal in plant and apparatus for the manufacture and storage of acetylene gas. The number of directors is not to be less than 3 nor more than 5; the first are M. Chance, T. Jefferson, and M. Chance, junr.; qualification, 500 shares.

Ancoats Vale Rubber Co., Ltd.—Capital £25,000., in £10. shares. This company has been formed to acquire the business of the Ancoats Vale Rubber Co., Ltd. (incorporated in 1866), and to carry on the business of indiarubber manufacturers, cycle and cycle accessory manufacturers, motor and carriage builders, engine and boiler makers, etc. The subscribers to the memorandum of association are:—W. Nall, Lancrosta-road, Pendleton, gentleman; J. E. Anderton, Thornfield, New Mills, surgeon; A. Hardie, 117, Adelaide-road, Hampstead, barrister; W. N. Henderson, 5, Cavendish-grove, Eccles, indiarubber merchant; G. Shaw, Pennington Hall, Leigh, brewer; R. A. Rumney, 22, Dickinson-street, Manchester, calico printer; F. Lees, Egerton-street, Heaton Park, Manchester, clerk.

H. B. Alder & Co., Ltd.—Capital £26,000, in 600 preference shares of £10. each and 20,100 ordinary shares of £1. each. This company has been formed to acquire the business carried on by G. B. Alder as "H. B. Alder & Co.," and to manufacture, sell, and deal in paints, oils, colours, varnishes, grease, tallow, soaps, tar, chemicals, etc. The subscribers to the memorandum of association are:—H. B. Alder, 60, Fenchurch-street, E.C., merchant; F. Jackson, 11, Great St. Helen's, E.C., accountant; A. J. Hough, 85, Gracechurch-street, E.C., shipbroker; H. H. Abraham, 17, Ryder-street, St. James's, S.W., director; E. T. Weston, 36, St. Mary-at-Hill, Eastcheap, secretary; C. R. Cunningham, 9, Cannon-street, E.C., merchant; L. Hinten, 85, Gracechurch-street, E.C., shipbroker.

IMPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending December 31st.

Acetic Acid—

Holland,	17 pks.	H. Lorenz
,,	50	R. W. Greeff & Co.
,,	10	A. & M. Zimmermann
,,	10	F. Stahlschmidt & Co.

Acetone—

Germany,	4 dms.	T. H. Lee
France,	10	Thames S. T. & L. Co., Ld.
Germany,	£97	Howes Brs. & Co
Belgium,	120	E. Catlin

Acids—

Holland,	245 pks.	Little & Johnston

Alkali—

France,	314 c.	J. Harrison & Co
Germany,	105	J. Barber & Co.
France,	120	,,

Alum—

Holland,	305 pks.	J. White

Alumina Sulphate—

Germany.	73 cks.	H. Wallace & Co.

Ammonium Phosphate

Holland,	31 cks.	Brit. Non-Flammable Wood Co.

Antimony Ore—

A. Turkey,	100 t.	H. Grey, Junr.
,,	30	G. Smith & Sons

Arsenic—

Portugal	61 brls.	Coverley & Westray

Barium Chloride—

Germany,	£30	Petri Brs.

Barytes—

Germany,	21 pks	H. Johnson & Sons
,,	122	J. L. Lyon & Co.
Holland,	200	W. Harrison & Co.
Belgium,	106	J. L. Lyon & Co.
,,	83	O'Hara & Hoar

Bleaching Powder—

France,	£25 31 cks.	J. M. Steel & Co.

Bone Meal—

E. Indies,	700 t.	A. Hunter & Co.
,,	100	Fox, Roy & Co.
,,	200	Vokins & Co., Ld.
,,	10	Cornwell, Son & Co.
,,	190	H. G. Cooper & Co.

Bones—

N. Zealand,	1 t.	Culverwell, Brooks & Co.
Sydney,	14	Hicks, Nash, & Co.
Canary Is.,	5	Cornwell, Son & Co.

Caoutchouc—

E. Indies,	245 c.	L. & I. D. Jt. Co.
Germany,	184	Wrightson & Son
,,	3	Craven & Co.
B. Guiana,	10	Lewis & Peat
B. W. I.,	21	Schoteield, Goodman & Sons
Borneo,	57	Elkan & Co.
Straits,	550	E. Boustead & Co.
Germany,	84	Prop. Bull Wf.
Straits,	253	Gilman Brs. & Co.
Holland,	65	Anderson, Weber & Co.
Straits,	600	Jewesbury & Co.
,,	170	Huttenbach & Co.
,,	400	Anderson, Weber & Smith
B. Guiana	52	Jackson & Sill
Cape,	2	J. Owen
Portugal,	2	L. & I. D. Jt. Co.

Castor Oil—

Italy,	10 cs.	J. Moss & Co.
,,	25	H. W. Wright
France,	54 pks.	F. Bochin
,,	28 brls.	Mordaunt Bros.
Belgium,	20	W. S. Mills
,,	87 pks.	C. & E. Morton

Caustic Potash—

France,	8 dms.	J. A. Reid
,,	10	W. E. Cole
,,	10	Lon. & Til. Ltge. C. & D. Co., Ld

Chalk—

Germany,	30 pks.	Butler's Wf., Ld.

Chemicals *(otherwise undescribed)*

Germany,	£450	L. & I. D. Jt. Co
,,	874	A. & M. Zimmermann
Belgium,	24	John Cockerill Line
U. States,	54	Wheatley & Co.
France,	111	Mory & Co.
Germany,	400	Craven & Co.
,,	160	H. Lambert
Holland,	13	A. & M. Zimmermann
,,	47	Hernu, Peron & Co., Ld.
Belgium,	5	Leach & Co.
,,	650	T. H. Lee
U. States,	1,020	S. C. Jones
Germany,	120	Craven & Co.
,,	15	Phillipps & Graves
Holland,	4	T. H. Lee
Germany,	20	J. Norrenberg & Co.

Citric Acid—

Germany,	2 pks.	Butler's Wf., Ld.

Cream of Tartar—

France,	5 pks.	B. & F. Wf. Co., Ld.
,,	15	F. C. Devon & Co.
,,	13	W. C. Bacon & Co.
,,	2	H. Johnson & Sons
Holland,	4	Kirkpatrick, Barr & Co.

Disinfectants—

Holland,	£40	A. C. Lloyd

Dried Blood—

U. States,	50 t.	A. Hunter & Co.

Dyestuffs—

Aniline

Germany,	10 pks.	Butler's Wf., Ld.

Annatto

Germany,	32 pks.	L. & I. D. Jt. Co.

Argols

Greece,	5 pks.	J. Knill & Co.
Italy,	305	Thames S. T. & L. Co., Ld.
,,	406	B. Jacob & Sons

Cochineal

Canaries,	5 pks.	L. & I. D. Jt. Co.

Cutch

Rangoon,	350 pks.	W. E. Cole
Straits,	1,652	Borneo Co., Ld.

Divi Divi

E. Indies,	36 pks.	Walker, Munsie & Co.

Extracts

U. States,	33 pks.	Rosenberg, Loewe & Co. Succrs.
France,	250	L. J. Levenstein & Sons
,,	17	Union L. Co., Ld.
Holland,	42	J. Norrenberg & Co.
Belgium,	15	Leach & Co.

Gambier

Straits,	137 pks.	Brinkmann & Co.
,,	143	Brown & Elmslie

Indigo

U. States,	15 srns.	W. J. & H. Thompson
E. Indies,	32 chts.	Parsons & Keith

Myrabolams

E. Indies,	570 pks.	R. Chambers & Co.
,,	1,675	Marshall & French
,,	520	Ralli Brs.

Saffron

Spain,	2 pks.	Richardson, Spence & Co.
,,	1	C. Brumlen & Co.
,,	1	J. Barber & Co.

Shumac

Italy,	500 pks.	J. Kitchen, Ld.

Tanners' Bark

Natal,	15 t.	A. & W. Nesbitt
Belgium,	21	Leach & Co.

Turmeric

E. Indies,	27 pks.	G. H. Green

Valonia

A. Turkey,	110 t.	Boutcher, Mortimore & Co.
,,	263	Hicks, Nash & Co.
,,	30	A. J. Humphery
,,	44	Fellows, Morton & Co., Ld.

Farina—

France,	4 pks.	E. Flageollet & Co.
,,	25	B. & F. Wf. Co., Ld.
Holland,	250	J. Barber & Co.
Germany,	60	Dunlop Bros.
Holland,	200	A. J. Hurst
,,	200	R. Bennett & Co.
,,	100	T. H. Lee
,,	100	G. Hornzee

Glucose—

France,	331 pks.	331 cwt.	Trier, Meyer & Co.
U. States,	200	1,175	Ohlenschlager Brs.
,,	100	600	Page, Son & East
,,	85	508	L. & Til. L. C. & D Co.
,,	1,000	1,000	C. Barnard
,,	500	500	L. Norman & Co., Ld.

U.States, 2,930 9,957 R. G. Hall & Co.
" 50 295 J. Keiller & Son, Ld.
" 100 590 J. Sutro & Co.
France, 231 231 W. E. Cole
" 200 200 L. Norman & Co., Ld.

Glue—
Germany, £600 Deering & Robottom
" 24 Butler's Wf., Ld.
France, 83 Mory & Co.
Holland, 14 T. Palmer
U. States, 118 H. Grey, Junr.
Germany, 225 L. & I. D. Jt. Co.
Belgium, 175 T. Ronaldson & Co.
" 1,380 T. M. Duche & Sons
Germany, 86 Steinhoff, Sons & Co.
France, 20 B. & F. Wf. Co., Ld.
" 140 Prop. Hay's Wf.

Glue Stock—
Germany, 134 bls Hicks, Nash & Co.
Holland, 136 "
Germany, 67 W. Balchin, Ld.
Sydney, 8 Goad, Rigg & Co
" 510 Anning & Cobb
France, 94 Page, Son & East
Ceylon, 8 Hicks, Nash & Co.

Glycerine—
France, £360 J. W. Cook & Co., Ld.
Sydney, 600 H. Hill & Sons

Iron Oxide—
A. Turkey, 200 t. Frey & Co., Ld.

Lead Acetate—
Germany, 10 cks. F. Bochin

Litharge—
Germany, 7 pks. H. Lambert
" 3 Butler's Wf., Ld.

Mercury—
Belgium, 2 cs. T. H. Lee

Methyl Alcohol—
France, 20 cks. E. Catlin

Molasses—
Holland, 265 brls. 300 c. J. R. Francis & Co
U. States, 437 2,403 Deering & Robottom
" 200 1,201 W. & W. H. Stead, Ld.

Naphtha—
Holland, 8 dms. Lister & Biggs
Germany, 3 brls. Tingle, Jacobs, & Co.

Naphthaline—
Belgium, 49 pks. J. M. Steel & Co.

Ochre—
Holland, 36 pks. Phillipps & Graves
France, 30 C. F. Gerhardt
" 37 J. W. Cook & Co., Ld.
" 15 A. Marshall & Son
" 57 J. L. Lyon & Co.
Spain, 100 "

Paraffin Scale—
U. States, 1,696 brls. Anglo-American Oil Co.
" 100 H. Hill & Sons

Paraffin Wax—
U. States, 603 cs. Anglo-American Oil Co.
" 400 brls. H. Hill & Sons
Rangoon, 800 bxs, "

Phosphate of Lime—
France, 435 t. A. Hunter & Co.

Phosphate Rock—
Algeria, 1,300 t. A. Hunter & Co.
" 1,200 Anglo-Contl. Guano Works
Belgium, 250 D. de Pass & Co.

Pitch—
W. Indies, 231 brls. Gillespie Brs & Co.
" 1,235 pks. L. & I. D. Jt. Co.
Germany, 50 brls. Fellows, Morton, & Co.
France, 58 cks. Poth, Hille, & Co.

Plumbago—
Germany, 16 brls. Becker & Wagner
" 23 cks. J. Puddy & Co.
" 36 Pearce, Duff, & Co.
Ceylon, 386 brls. J. Thredder, Son, & Co.
" 232 Marshall & French
U. States, 46 pks. Lunham & Moore
" 18 brls. W. Dixon

Potassium Bicarbonate—
Holland, 17 cks. A. & M. Zimmermann

Potassium Carbonate—
France, 231 c. J. A. Reid
" 90 Carey & Sons
Germany, 212 H. Lambert

Potassium Chlorate—
France, 300 dms. J. W. Cook & Co., Ld.

Potassium Chloride—
Germany, 102 bgs. Bessler, Waechter, & Co.

Rosin—
U. States, 6,032 brls. F. & S. Chiesman & Co.
" 1,669 Prod. Brokers' Co., Ld.
" 2,423 T. Nickels & Co.

Saltpetre—
E. Indies, 287 bgs. Perkins & Homer
" 1,834 Lucas & Spencer's Wf.
Germany, 16 P. Hecker & Co.
" 350 S. E. Rly Co.
" 16 cks. L. & I. D. Jt. Co.

Soap—
Germany, £56 Phillipps & Graves
U. States, 150 Lunham & Moore
France, 65 J. W. Cook & Co. Ld.

Soda—
U. States, 6 c. L. & I. D. Jt. Co.

Sodium Hyposulphite—
Germany, 12 cks. Deering & Robottom
Holland, 40 J. Owen

Sodium Nitrate—
Chili, 9,167 bgs. Anglo-Contl. Guano Works

Sodium Prussiate—
Belgium, 10 cks. Blagden, Waugh, & Co.

Sodium Sulphate—
Holland, 20 cks. H. Lorenz

Starch—
Belgium, 56 pks. F. Claydon & Co
" 680 E. & T. Pink
" 14 Leach & Co.
" 41 Sawer, Sons, & Co.
" 106 T. Ronaldson & Co.
" 40 T. H. Lee
Holland, 771 Little & Johnston
" 30 Phillipps & Graves
" 40 Hernu, Peron, & Co., Ld.
France, 49 W. E. Cole
Germany, 1,745 Horne & Co.
U. States, 4,199 J. Forsey
" 1,000 Ohlenschlager Brs.
" 250 R. Bennett & Co.

Stearine—
U. States, 5 cks. Hoare, Wilson, & Co.
" 8 pks. L. & I. D. Jt. Co.
Belgium, 9 cks. T. H. Lee
" 3 H. G. Dutfield

Talc—
Ceylon £60 E. Davis & Co.
Germany, 47 Craven & Co.
E. Indies, 3,930 Major & Field

Tannin—
Germany, £40 R. W. Greeff & Co.

Tar—
N. Russia, 56 brls. Union Ltge. Co., Ld.
France, 588 Burt, Boulton, & Co.
Germany, 100 W. Beard & Son
" 150 Linck, Moeller, & Co.
U. States, 450 T. Nickels & Co.
" 150 Prod. Broker's Co.

Tartaric Acid—
Belgium, 10 pks. F. C. Devon & Co.
Holland, 30 Kirkpatrick, Barr, & Co.
" 33 B. & F. Wf. Co., Ld.
" 17 W. C. Bacon & Co.

Ultramarine—
Germany, 22 pks. Steinhoff, Sons, & Co.
Holland, 8 J. Owen
" 4 Hernu, Peron, & Co.
" 4 Haeffner, Hilpert, & Co.

Varnish—
U. States, 136 pks. J. R. Francis & Co.
" 16 Atlantic Transport Co.
" 23 Lunham & Moore
Germany, 1 L. & I. D. Jt. Co.
" 4 Butler's Wf., Ld.
" 4 Phillipps & Graves

Verdigris—
Holland, 1 pk. R. W. Greeff & Co.

Waste Salt—
Germany, 4 t. Norrenberg & Co.
" 47 Humphery & Co

White Lead—
Belgium, 21 pks. J. L. Lyon & Co.
" 56 T. & W. Farmiloe, Ld.
France, 17 J. Watt & Son
Holland, 36 Taylor Brs.
" 49 T. & W. Farmiloe, Ld.

Wolfram Ore—
Queensland, 3 t. Major & Field

Wood Pulp—
Sweden, 160 bls. W. G. Taylor & Co., Ld.
" 410 Christophersen & Co.
" 68 W. D. Cork
" 340 J. W. Cook & Co., Ld.
Norway, 112 W. G. Taylor & Co., Ld.
" 800 Johnsen & Jorgensen
" 7,320 W. D. Cork
" 500 G. Hagborg
" 1,600 J. Sharp
" 400 W. E. Bott & Co.
" 200 Becker & Co.
U. States, 2,282 Henderson, Craig, & Co.
Germany, 510 E. J. & W. Goldsmith
Holland, 57 C. S. Lovell
" 71 Henderson, Craig, & Co.
Canada, 480 A. E. Reed & Co.
Belgium, 1,224 P. Heydemann

Zinc Oxide—
Germany, 45 pks. R. W. Greeff & Co.
" 50 M. Ashby, Ld.
Holland, 60 "
" 50 Lon. & Til. Ltge. C. & D. Co.
" 20 R. W. Greeff & Co.
" 100 Burrell & Co.
France, 10 Kerestedji & Co

LIVERPOOL.

Week ending December 29th.

Acetic Acid—
Rotterdam, 19 bllns.

Albumen—
Naples, 5 cs. D. Mangus

Ammonia—
Boston, 1 cyldr. Armour & Co.

Barytes—
Rotterdam, 21 cks. 50 bgs.

Bone Meal—
Karachi, 2,634 bgs.
Bombay, 1,000 "

Boracic Acid—
Leghorn, 52 cks.

Borate of Lime—
Valparaiso, 875 bgs.

Chemicals *(otherwise undescribed)*
Genoa, 27 cks.

Colours—
Rotterdam, 42 cks.
Ghent, 2 brls.

Cream of Tartar—
Patras, 2 brls.
Bordeaux, 29 cks.
Genoa, 10

Dyestuffs—
Extracts
Amsterdam, 2 cs.
New York, 150 brls.
Fiume, 294 "
New York, 125 bxs,
Baltimore, 50 brls. McArthur & Co.
Fiume, 1,233 E. J. Gutmann
" 200 Oak Extract Co., Ld.
Newport, 20 H. Rooke, Sons & Co.

Fustic
Trieste, 5 t.

Myrabolams
Bombay, 670 bgs.

Shumac
Barcelona, 4 bgs. 63 sks.

Dyestuffs *(otherwise undescribed)*
Barcelona, 4 bgs.

Farina—
Rotterdam, 200 bgs.
Fiume, 620 10 bls.

Glue—
Rotterdam, 200 bgs. 7 cks. 9 cs.

Naphthaline—
Bordeaux, 5 cks.

Ochre—
Brunswick, Ga., 7 brls.

Oxalic Acid—
Rotterdam, 4 cks.

Paint—
Boston, 10 brls. Musson & Co.

Painters' Colours—
Rotterdam, 4 cks.

Paraffin Scale—
New York, 562 brls. Anglo-American Oil Co.

Phosphate Rock—
Pensacola, 350 t. Cp. Central Phosphate
" 215 G. Hainze & Co

Pumice Stone—
Messina, 9 cks.

Rosin—
Carrabelle, 2,610 brls.

Salt—
Hamburg, 500 bgs.

Saltpetre—
Hamburg, 4 cks. 2 brls.

Soap—
Rotterdam, 43 cs.
Valencia, 10
Bari, 295

Soapstone—
New York, 200 bgs.
Bordeaux, 587 pks. Geo G Blackwell, Sons & Co

Soda—
Genoa, 31 brls.

Starch—
Boston, 200 bgs Earnshaw & Co.
" 400 sks.

Stearine—
Rotterdam, 7 bls.
Antwerp, 63 bgs.

Sulphur—
Catania, 150 t.

Tallow—
Boston, 307 brls. 477 tcs.
St. John, N.B., 225 T. M. Moore

Turpentine—
Trieste, 10 cs.
Carrabelle, 295 brls.

Ultramarine—
Rotterdam, 17 cks.

Varnish—
New York, 20 brls.
Rotterdam, 3 cks.

Verdigris—
Marseilles, 2 brls.

Waste Salt—
Hamburg, 100 bgs.

White Lead—
Trieste, 20 brls.
Rotterdam, 50 cks.

Wood Pulp—
Boston, 150 bdls. Lever Brs.

Zinc Ashes—
Genoa, 23 bgs.

Zinc Oxide—
New York, 200 brls.
Rotterdam, 20 cks. J. Mathews & Co.

Zinc White—
Rotterdam, 10 cks.

MANCHESTER.

Week ending December 31st.

Alizarine—
Rotterdam, 81 cks. 5 brls.

Aniline Colours—
Hamburg, 23 cks. 1 cs.

Antimony Salts—
Hamburg, 2 cks.

Barytes—
Hamburg, 54 cks.
Rotterdam, 200 bgs. 34 cks.

Borax—
Hamburg, 20 cks.

Caustic Potash—
Antwerp, 20 dms.

Caustic Soda—
Hamburg, 2 cs.

Chalk—
Treport, 4 cs.

Chemicals *(otherwise undescribed)*
Gothenburg, 170 bls.
Hamburg, 10 cs.
Rotterdam, 1 bln. 3

Colours—
Ghent, 2 brls.
Hamburg, 8 cks.
Rotterdam, 48 56 35 cs. 8 bxs.

Dyestuffs (*otherwise undescribed*)
Antwerp, 1,420 bgs
Farina—
Hamburg, 1,020 bgs.
Stettin, 5,050 Browne, Geveke, & Co.
" 1,829
" 3,600 W. H. Stott & Co.
Flake White—
Hamburg, 4 cks.
Glucose—
Stettin, { 1,000 bgs. / 178 cks.
Glue—
Hamburg, 80 bgs.
Rotterdam, 515
Glycerine—
Hamburg, 5 cs.
Limestone—
Antwerp, 15 cs. 1 crte.
Litharge—
Rotterdam, 67 cks.
Lithopone—
Hamburg, 44 cks.
Ochre—
Hamburg, 5 cks.
Oxalic Acid—
Rotterdam, 15 cks.
Paint—
Hamburg, 40 dms.
Potash—
Hamburg, 56 cks. 21 dms.
Rotterdam, 30
Potassium Carbonate—
Stettin, 19 cks. W. H. Stott & Co.
Treport, 4
Soap—
Rotterdam, 1 cs.
Soda—
Hamburg, 1 cs.
Sodium Acetate—
Treport, 56 cks.
Sodium Stannate—
Hamburg, 2 cks.
Starch—
Hamburg, 312 cs.
Rotterdam, { 152 / 20 bgs.
Stearine—
Rotterdam 127 bls.
Sulphuric Acid—
Rotterdam, 20 cks
Tannic Acid—
Hamburg, 15 cks. 7 cs.
Tartar—
Hamburg, { 25 kgs. / 39 cks.
Tartar Emetic—
Hamburg, 44 cks.
Tartaric Acid—
Hamburg, 8 cks.
Rotterdam, 4
Ultramarine—
Hamburg, 2 cks.
Rotterdam. 16
Waste Salt—
Hamburg, 507 bgs. and qty.
Wood Pulp—
Gefle, 2,000 bls.
Gothenburg, 2,829
Kallero, 2,271
Hamburg, 400 pks.
Stettin, 1,118 W. H. Stott & Co.
Zinc Oxide—
Antwerp, 3 cks.
Rotterdam, 80 brls.
Zinc Sulphate—
Hamburg, 2 cks.

HULL.

Week ending December 31st.

Ammonium Chloride—
Hamburg, 2 cks. Bailey & Leetham, Ld.
Barytes—
Rotterdam, 65 cks. Hull & Netherlands S. S. Co.
Chemicals (*otherwise unaescribed*)
Antwerp, 193 pks. Wilson, Sons, & Co., Ld.
" 2 cks.
Bari, 66 "
Ghent, 20 brls.
Hamburg, 10 kgs. "
Rotterdam, 2 cks. Hull & Netherlands S. S. Co.
Stockholm, 5 cks. Wilson, Sons, & Co., Ld.
Colours—
Amsterdam, 75 cks. Hull & Netherlands S. S. Co.
Antwerp, 60 Bailey & Leetham, Ld.
" 15 Wilson, 5 bgs. Sons, & Co., Ld.
Bremen, 65 cks.
Ghent, 20 pks.
Rotterdam, { 230 24 cs. 4 bxs. / 4 brls. Hull & Netherlands S. S. Co. / 76 cks.
Rouen, 49 Wilson, Sons, & Co., Ld.
Stettin, 25 "
Trieste, 160
Cryolite—
Copenhagen, 4 cks. Wilson, Sons, & Co., Ld.
Dyestuffs—
Alizarine
Rotterdam, 30 brls. Hull & Netherlands S. S. Co.
7 cks
Extracts
Fiume, 105 brls.
Hamburg, 100 bgs. Wilson, 2 cs. Sons, & Co., Ld.
Shumac
Palermo, 500 bls. Wilson, Sons & Co., Ld.
Trieste, 108 "
Farina—
Harlingen, 50 bls. Hull & Netherlands S. S. Co.
Stettin, 40 pks. Wilson, Sons, & Co., Ld.
Glue—
Rotterdam, 3 bls. Hull & Netherlands S. S. Co.
14 bgs.
Rouen, 40 Wilson, 60 cks. Sons, & Co., Ld.
Stettin, 1 "
Lead Acetate—
Hamburg, 6 cks. Bailey & Leetham, Ld.
Paraffin Wax—
New York, 250 pks.
Phosphates—
Bona, 1,500 t.
Pitch—
Copenhagen, 50 brls.
Potash—
Dunkirk, 8 dms. Wilson, Sons, & Co., Ld.
Hamburg, 22 Bailey & Leetham, Ld.
Rosin—
Hamburg, 50 cks. Anglo-American Oil Co.
Saltpetre—
Hamburg, 6 cks. Bailey & Leetham, Ld.
Starch—
Amsterdam, 40 cs. Hull & Netherlands S. S. Co
Antwerp, 49 Bailey & Leetham, Ld.
" 340 Wilson, Sons, & Co., Ld.
Bremen, 2,275 Veltmann & Co.
Ghent, 187 Wilson, Sons, & Co., Ld.
Stearine—
Antwerp, 24 bgs. Wilson, Sons, & Co., Ld.
Sulphur—
Catania, { 766 bgs. / 43 cks.
Tallow—
Dunkirk, 247 cks. Wilson, Sons, & Co., Ld.
New York, 141 tcs. "
Tar—
Stockholm, 30 brls. Wilson, Sons, & Co., Ld.
Tartar—
Bordeaux, 2 cks.
Tartaric Acid—
Rotterdam, 7 cks. Hull & Netherlands S. S. Co
Turpentine—
Trieste, 8 cs. Wilson, Sons, & Co., Ld.
Ultramarine—
Rotterdam, 4 cks. Hull & Netherlands S. S. Co.
Waste Salt—
Hamburg, 50 bgs. Bailey & 50 t. Leetham, Ld.
White Lead—
Amsterdam, 49 cks. Hull & Netherlands S S. Co.
Wood Pulp—
Abo, 16 pks.
Drontheim, 800 Wilson, Sons, & Co., Ld.
Gothenburg, 466
Hango, 169
Zinc Ashes—
Stockholm, 28 brls. Wilson, Sons, & Co., Ld.
Zinc Oxide—
Antwerp, 100 cks. Bailey & Leetham, Ld.
Rotterdam, 5 Hull & Netherlands S. S. Co.

GLASGOW.

Week ending January 5th.

Aniline Salts—
Rotterdam, 18 cks. J. Rankine & Son
Barium Chloride—
Hamburg, 100 bgs.
Barytes—
Hamburg, 40 bgs.
Rotterdam, 62 pks
Bleaching Powder—
Rotterdam, 23 cks. J. Rankine & Son
Chemicals (*otherwise undescribed*)
Rotterdam, 4 cs. J. Rankne & Son
Colours—
Rotterdam, 2 bskts. J. Rankine
80 pks. & Son
Hamburg, 8 cks. 1 cs.
Cottonseed Oil—
New York, 160 brls.
Dyestuffs—
Alizarine
Rotterdam, 148 brls. J. Rankine
24 cks. 1 cs. & Son
Aniline
Rotterdam, 9 cks. 2 cs. J. Rankine & Son
Aniline Colours
Hamburg, 2 cks. 3 cs.
Extracts
Philadelphia, 50 brls.
Glucose—
Portland, M., 150 brls.
Glue—
New York, 19 crts.
Rouen, 20 cks.
Molasses—
New York, 297 brls.
Ochre—
Rotterdam, 12 cks. J. Rankine & Son
Paint—
New York, 4 brls.
Paraffin Scale—
Baltimore, 200 brls.
New York, 600
Paraffin Wax—
Philadelphia, 150 brls. 200 cs.
Potash—
Hamburg, 39 cks.
Potassium Sulphate—
Rotterdam, 4 cks. J. Rankine & Son
Pyrogallic Acid—
Hamburg, 2 cs.
Soda—
Rotterdam, 22 cks. J. Rankine & Son
Starch—
New York, 100 bgs.
Amsterdam, 2 cs.
Stearine—
New York, 20 tcs.
Tannin—
Hamburg, 2 cs.
Waste Salt—
Hamburg, { 282 cks. / 500 bgs.
Wood Pulp—
Christiania, 5,120 bls.
Rotterdam, 25
Zinc Oxide—
New York, 330 brls.
Zinc White—
Rotterdam, 54 pks. J. Rankine & Son

TYNE.

Week ending December 31st.

Alum Earth—
Hamburg, 83 cks. Tyne S. S. Co.
Antimony Ore—
Hamburg, 270 cs. Tyne S. S. Co.
Asbestos—
Rotterdam, 2 crts. Tyne S. S. Co.
Barytes—
Antwerp, 200 bgs. Tyne S. S. Co.
Rotterdam, 266 "
Chemicals (*otherwise undescribed*)
Hamburg, 1 cs. Tyne S. S. Co.
Colours—
Antwerp, 2 cks. Tyne S. S. Co.
Rotterdam, 1 "
Extracts—
Rotterdam, 10 cks. Tyne S. S. Co.
Limestone—
Antwerp, 7 crts. Tyne S. S. Co.
Nitric Acid—
Antwerp, 5 cs. Tyne S. S. Co.
Ochre—
Rotterdam, 2 cks. Tyne S. S. Co.
Paint—
Frederikshavn, 1 bx.
Soap—
Rotterdam, 2 cs. Tyne S. S. Co.
Starch—
Rotterdam, 60 cs. Tyne S. S. Co.
Wood Pulp—
Christiania, 215 bls. P. H. Matthiesen & Co.

GOOLE.

Week ending December 28th.

Alizarine—
Rotterdam, 124 cks. 10 cs.
Aniline—
Hamburg, 5 cks.
Antimony—
Boulogne, 4 cks.
Barytes—
Antwerp, { 60 bgs. / 33 cks.
Colours—
Hamburg, 4 cs.
Rotterdam, 2 cks.
Dyestuffs (*otherwise undes.*)—
Amsterdam, 11 cks. 1 cs.
Antwerp, 289 bgs. 8 brls.
Boulogne, 156 cks. 3 cs.
Hamburg, 62 pcs.
Rotterdam, 455 47
Farina—
Delfszyhl, 600 bgs.
Hamburg, 100
Fustic—
Hamburg, 20 t.
Glucose—
Calais, 100 bgs.
Glue—
Antwerp, 5 cks.
Boulogne, 1 cs.
Logwood—
Belize, 500 t.
Hayti, 52
Phosphates—
Ghent, 2,304 bgs.
Potash—
Calais, 20 dms.
Dunkirk, 20 cks. 20
Potassium Sulphate—
Hamburg, 9 cks.
Rotterdam, 9
Saltpetre—
Antwerp, 85 bgs.
Rotterdam, 70
Sodium Nitrate—
Dunkirk, 372 bgs.
Waste Salt—
Hamburg, 807 cks.

GRIMSBY.

Week ending December 31st.

Caoutchouc—
Antwerp, 4 cs.
Hamburg, 3
Chemicals (*otherwise unaescribed*)
Danzig, 13 cks.

Hamburg, 2
Colours—
Antwerp, 4 cks. 90 pks.
Danzig, 9

Hamburg, 20 100
Rotterdam, 20 bgs. 14 cs.
Farina—
Hamburg, 100 bgs.

Glue—
Hamburg, 6 cks.
Glycerine—
Dieppe, 2 cks.

Indigo—
Rotterdam, 9 chts.
Saltpetre—
Antwerp, 68 bgs.

EXPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.
Week ending January 4th.

Acids—
Gibraltar, 3 cs. £12
Bombay, 1 24
Mauritius, 50 pks. 20
E. London, 28 55
Fremantle, 12 c. 13
Alkali—
New York, 1 t. £6
Alum Waste—
Calcutta, 41 t. 4 c. £101
Ammonia—
Durban, 5 cs £15
Bombay, 4 14
Melbourne, 20 27
Singapore, 2 t. 1 c. 20
Hong Kong, 5 8 325
Jersey, 4 5 285
Calcutta, 6 15
Cologne, 49 cydrs. 120
Ammonium Carbonate—
Calcutta, 5 c. £8
Cologne, 2 t. 19 70
Stockholm, 1 26
Copenhagen, 10 14
Rotterdam, 1 27
Ammonium Chloride—
Messyne, 2 brls. £12
Dusseldorf, 2 t. 10 c. 45
Adelaide, 1 40
Ammonium Sulphate—
Honolulu, 200 t. £2,050
Dunkirk, 100 1 c. 1,000
Antwerp, 50 10 550
Barbadoes 25 253
Arsenic—
Calcutta, 5 t. £130
Bone Meal—
Cologne, 100 t. 10 c. £488
Jersey, 9 50
Borax—
Wellington, 14 c. £12
Rotterdam, 48 cks. 72
Melbourne, 1 t. 15
Carbon Bisulphide—
Adelaide, 20 cs. £21
Caustic Soda—
Delagoa Bay, 7 c. £7
Brisbane, 8 12
Lyttelton, 13 17
Wellington, 1 t. 7 c. 102
Canterbury, 1 17
Pt. Elizabeth, 2 2 63
Melbourne, 2 18 43
Chemicals *(otherwise undescribed)*
Pt. Elizabeth, 5 cs. £53
Cape Town, 16 57
Lisbon, 2 26
Durban, 3 1 cs. (pt) 33
Bombay, 25 30
Calcutta, 1 9
Brisbane, { 3 / 24 pks. (pt.) 5 frkns. } 76
Brussels, 1 brl. 18
Hamburg, 1 ck. 30
Libau, 1 30
Adelaide, 21 31
Melbourne, 59 124
Singapore, 12 kgs. 6 cs. 38
Bordeaux, 4 cks. 9
Citric Acid—
Durban, 1 c. £5
Cape Town, 1 kg. 6
Adelaide, 5 9
Coal Products—
Alizarine
Boston, 40 cks. —
New York, 50 £527
Benzine
Sydney, 20 dms. £6
Benzol
Antwerp, 9 cks. £63
Rotterdam, 2 dms. 15
Hamburg, 48 brls. 87
Carbolic Acid
Boston, 31 cks. £90
Hong Kong, 95 dms. 36
Pt. Elizabeth, 53 33

Cologne, 48 brls. 189
Durban, 10 9
Mauritius, 1 cs. 25 11
Creosote
New York, 500 cks. £353
Dyes
Boulogne, 1 ck. 1 cs. £17
Boston, 2 brls. 39
Naphtha
Pt. Elizabeth, 10 dms. £23
Sydney, 100 42
Melbourne, 30 25
Naphthaline
Dusseldorf, 500 bgs. £244
Pitch
Antwerp, 1,428 t. £1,686
Amsterdam, 613 760
Cette, 1,477 1,590
New York, 17 brls. 40
Boston, 700 cks. 390
Alexandria, 368 109
Pyridine
Hamburg, 3 dms. £90
Pyridine Bases
Stettin, 24 cks. £245
Tar
Hamburg, 329 brls. £145
Delagoa Bay, 130 dms. 10
Cape Town, 352 19
Durban, qty. & 300 21
Honolulu, 65 brls. 31
Mauritius, 10 6
Melbourne, 20 23
Coal Products *(otherwise undes.)*—
Durban, 300 dms. £45
Copper Sulphate—
Durban, 14 c. £8
Wellington, 10 9
Rouen, 5 t. 94
Bordeaux, 25 466
Cream of Tartar—
Townsville, 13 c. £56
Durban, 15 58
Pt. Elizabeth, 3 14
Disinfectants—
Montreal, 19 pks. £45
Singapore, 56 25 dms. 69
Cape Town, 68 30
Madras, 1 cs. 15
Brisbane, 1 62 29
Sydney, 25 69
Melbourne, 20 cks. 10 50
Guano—
Demerara, 56 t. 10 c. £485
Hydrochloric Acid—
Pt. Elizabeth, 2 t. 19 c. £13
Manure—
Jersey, 84 t. 10 c. £655
Cape Town, 30 130
Auckland, 51 210
Dunkirk, 5 35
Mercuric Oxide—
Hamburg, 4 cs. £124
Nitric Acid—
Shanghai, 20 cs. £12
Madras, 15 18
Townsville, 1 t. 32
Phosphorus—
Sourabaya, 1 c. £12
Melbourne, 5 cs. 44
Potassium Bromide—
Bombay, 2 cs. £11
Potassium Carbonate—
Melbourne, 10 c. £9
Potassium Chlorate—
Sourabaya, 10 c. £17
Karachi, 14 26
Bombay, 2 t. 11 93
Potassium Cyanide—
Fremantle, 10 t. 10 c. £1,275
Townsville, 6 50 cs. 1,123
Sydney, 1 4 c. 135
Delagoa Bay, 1 107
Melbourne, 3 350
New York, 2 210
Shanghai, 3 cs. 9
Saltpetre—
Wellington, 15 c. £16
Oporto, 7 t. 10 148
Brisbane, 2 41
Rio de Janeiro, 4 13 99

Santos, 17 18
Barranquilla, 9 9 48
Sheep Dip—
B. Ayres, 3,800 cs. £8,655
Pt. Elizabeth, 20 dms. 5
E. London, 5 t. 12 c. 125
Silver Nitrate—
Bombay, 1 cs. £13
Soda—
Boston, 11 t. 5 c. £25
Soda Crystals—
Mauritius, 4 t. 1 c. £11
Sodium Acetate—
Melbourne, 1 t. 11 c. £22
Sodium Bicarbonate—
Brisbane, 5 cks. 2 cs. £7
Pt. Elizabeth, 1 t. 6
Sodium Sulphate—
Ghent, 110 t. £165
Sodium Sulphide—
Constantinople 4 t. 18 c. £46
Strontium Nitrate—
Karachi, 13 c. £21
Sulphuric Acid—
Rangoon, 20 cs. £19
Superphosphates—
Mauritius, 148 t. 14 c. £539
Tartaric Acid—
Bombay, 5 cs. £26
Cape Town, 12 c. 71
Wellington, 4 22
Pt. Elizabeth, 1 9
Durban, 3 kgs. 16
Brisbane, 2 t. 110

LIVERPOOL.
Week ending January 4th.

Acetic Acid—
Dunedin, 1 t. 1 c. £16
Alkali—
Oporto, 5 t. 4 c. 1 q. £21
Tarragona, 4 11 2 18
Malaga, 20 90
San Sebastian, 22 1 90
Barcelona, 7 12 1 30
Boston, 4 13 1 20
Montreal, 18 10 3 73
N'castle, N.S.W., 8 6 1 50
Wellington, 5 25
Alum—
Melbourne, 6 t. £30
N'castle. N.S.W., 1 5
Alexandria, 9 47
Sydney, 3 15
Ammonia—
Maranham, 1 c. £8
Ammonium Carbonate—
Ceara, 7 c. £13
Maranham, 2 5
Genoa, 2 t. 3 3 q. 55
Venice, 2 3 3 55
B. Ayres, 9 3 16
Ammonium Chloride—
Trieste, 1 t. £31
Antwerp, 1 10 c. 26
Barcelona, 1 8 24
Ammonium Sulphate—
Demerara, 150 t. 5 c. £1,520
Genoa, 28 13 282
Venice, 38 5 371
Malaga, 51 530
Valencia, 51 5 514
Honolulu. 1,010 18 2 q. 1,128
Batavia, 31 10 280
Philadelphia, 50 14 3 530
Bordeaux, 5 53
Gd. Canary, 51 408
Barium Chlorate—
Rotterdam, 5 c. £14
Basic Slag—
Christiania, 10 t. £15
Bleaching Powder—
Baltimore, 91 cks.

Bombay, 6 cs.
Boston, 610
Cambria, 18
Chicago, 43 cks. 35 bxs.
Havana, 10
Maranham, 5
New York, 120
Oporto, 15
Philadelphia, 304
Portland, M., 41
Rio de Janeiro, 14
Santander, 26
Trieste, 58
Vera Cruz, 99
Windsor Mills, 51
Boracic Acid—
Halifax, 6 c. 2 q. £9
Montreal, 2 t. 2 55
Sydney, 14 20
Antwerp, 1 17
Borax—
Ghent, 19 c. 3 q. £17
Rotterdam, 12 t. 11 3 16 5
Toronto, 12 15 21 7
Halifax, 2 8 41
Salaverry, 12 9
Piræus, 1 2 15
Calcium Chloride—
Hamburg, 6 t. 2 c. £14
Amsterdam, 9 20
Maranham, 1 4 3
Carbolic Acid—
Rouen, 5 t. 3 c. £73
Rotterdam, 5 100
Odessa, 1 2 1 q. 36
Wellington, 2 10 40
Marseilles, 1 6
Hiogo, 2 9 1 121
Shanghai, 9 cs. 32
Caustic Potash—
B. Ayres, 8 c. 2 q. £5
Caustic Soda—
Acapulca, 10 bxs.
Alexandretta, 50 dms.
Alexandria, 15
Algoa Bay, 25 cs.
Amsterdam, 108
Antwerp, 12 6 cks. 7 brls.
Barcelona, 50
Bombay, 20
Brindisi, 20
B. Ayres, 30
Callao, 50
Cartagena, 20
Caxias, 3
Cheribon, 4
Chicago, 20 45 bxs. 15
Christiania, 15
Cuidad Bolivar, 10
Constantza, 224
Corfu, 30
Fiume, 30
Genoa, 331
Ghent, 17
Hamburg, 16
Havre, 68
Hiogo, 273
Hong Hong, 2 cks.
Kingston, Ja., 10
Leghorn, 93
Malaga, 20 100 kgs.
Malta, 7
Marseilles, 20
Messina, 35
M. Video, 200
Nantes, 108
Naples, 25
New York, 75
Panama, 10
Philadelphia, 85
Piræus, 113
Pt. Adelaide 55
Pt. Credit, 35
Pt. Natal, 32
Puerto Cabello, 20
Rangoon, 18
Rio G. do Sul, 56
Rotterdam, 17
Rouen, 19
Salonica, 11

Samarang, 90
Santander, 50
Santos, 145
Seville, 298
Sousee, 50
Sourabaya, 35
Sterling, 50
Sydney, 5 cks.
Talcahuano, 25
Tampico, 7 40
Tarragona, 30 20
Teneriffe, 7
Tilusville, 50
Valencia, 50
Valparaiso, 100
Vera Cruz, 295
Vigo, 15
Volo, 93
Yokohama, 300

Chemicals (*otherwise undescribed*)

Melbourne, 5c. 3q. £7
Philadelphia, 25 t 19 3 702
Natal, 2 10 40
Barcelona, 2 30
Montreal, 5 7 2 74
New York, 2 13 2 66
Gothenburg, 1 10 45
Rotterdam, 10 3 8
Genoa, 3 4 51
Odessa, 5 8 2 138
Pt. Elizabeth, 1 5
Mexico City, 1 cs. 10

China Clay—

Baltimore, 190 t.
Boston, 550 cks.
Philadelphia, 570 387 bgs.
Portland, M., 285
Rio de Janeiro, 96

Coal Products—

Aniline Oil

St. Louis, 20 dms.

Aniline Salts

Barcelona, 30 brls.

Creosote

Lisbon, 100 brls.

Creosote Oil

Bordeaux, 250 brls.

Naphtha

Trinidad, 1 ck.

Pitch

Assinee, 88 pcs.
Cape Town, 1 brl.
Marseilles, 810 t.

Tar

Johannesburg, 100 dms.
Philadelphia, 1 brl.

Copperas—

Alicante, 2 t. 11 c. 1 q. £5

Copper Sulphate—

Bordeaux, 163 t. 8 c. 3 q. / 108 cks. / 155 bgs. —
Nantes, 200 / 48 cks. / 9 t. 16 —
Venice, 30 5 2 £557
Rouen, 45 16 736
Genoa, 24 18 442
Bombay, 2 10 43
Catania, 5 79
Naples, 10 1 167
Callao, 4 1 70
Calcutta, 10 171
Marseilles, 20 1 1 384
Messina, 4 19 78

Cream of Tartar—

Buenaventura, 2 c. 1 q £13
St. John's Nfd., 1 4

Disinfectants—

Madras, 6c. 2q. £7
Bombay, 10 2 17
Rio de Janeiro, 4 2 23

Dyestuffs—

Aniline Colours

New York, 19cks. 1 cs.

Extracts

Barcelona, 20 cks.
Boston, 45
Hamburg, 10

Logwood

Yokohama, 124 bgs.

Dyestuffs (*otherwise undescribed*)

Cape Town, 5cks. 1 cs.
Yokohama, 1

Glycerine—

Sydney, 1 t £58
Bahia, 4c. 12
Valparaiso, 2 2q. 5
Wellington, N.Z., 10 30

Guano—

Malaga, 185 t. 10 c. £1,395

Iron Oxide—

Philadelphia, 5 t 2 c. £20

Magnesia—

Barcelona, 4 cs.
Beyrout, 25
Montreal, 2
New York, 10
Tampico, 2

Magnesium Chloride—

Bombay, 6 t. 1 c. £16

Magnesium Sulphate—

Coro, 100 bxs

Oxalic Acid—

Syra, 1 t. £35

Paint—

Arecibo, 2 cks.
Belize, 60 kgs.
B. Ayres, 21 dms.
Colombo, 7
Conakry, 80
Constantinople, 2 cs.
Hamburg, 27 3
Havana, 1
Jeremie, 2
Manaos, 17
Manzanillo, 2
Melbourne, 48
Nassau, 3 20
New York, 110
Para, 23 20 26 brls.
Pernambuco, 35
Pittsburg, 100
Ponce, 4
Pt. Natal, 160
Pt. Said, 148
Punta Arenas, 16
Rotterdam, 275 bgs.
St. Croix, 222 kgs.
Sagua La Grande, 2
Salaverry, 50
Santander, 20
Sapeli, 39 pks.
Sanchez, 3
Secondee, 5 48
Sierra Leone, 6 dms.
Talcahuano, 10 brls.
Tampico, 7 2
Valparaiso, 200
Vera Cruz, 4 dms.
Wellington, 224 pks.

Painters' Colours—

Corfu, 4 brls.
Havana, 20 kgs. 4
Hong Kong, 3 cks.
Manila, 11
Maranham, 10

Paraffin Wax—

Larnaca, 10 cs.
Leghorn, 140 bgs.
Patras, 15 15
Tampico, 80 sks.
Vera Cruz, 150

Phosphorus—

Hiogo, 1 t. £165
Shanghai, 1 14 c. 230
Tampico, 10 2 q. 93

Picric Acid—

New York, 1 t. 15 c. £175

Potashes—

Rosario, 5c. £6

Potassium Bichromate—

Rio de Janeiro, 6c. £11
Venice, 11 23

Potassium Carbonate—

Baltimore, 3 t. 6 c. £61
New York, 9 1 160

Potassium Chlorate—

Christiania, 6 t. £191
Copenhagen, 4 10 c. 138
Gothenburg, 31 879
Hamburg, 7 12 3 q. 227
Naples, 1 10 45
New York, 3 15 123
Para, 2 5
Randers, 2 60
Rio de Janeiro, 10 15
Shanghai, 8 10 285
Sydney, 20 108
Tampico, 15 23
Uddevalla, 5 154
Vera Cruz, 1 31

Potassium Cyanide—

Rio de Janeiro, 4 c. £46

Salt—

Accra, 5 t.
Amsterdam, 80
Antwerp, 239
Baltimore, 135
Belize, 4 9 c.
Benin, 47 2
Boston, 300
B. Ayres, 149 14
Bugumba, 40
Calcutta, 770
Cameroons, 101 14
C. C. Castle, 22 6
Cape Town, 10
Cette, 7 6
Chicago, 30
Christiania, 100 250 cs.
Conakry, 267
Corinto, 5
Dunedin, 90
E. London, 23 8 c.
Ghent, 55
Gd. Bassa, 5
Gd. Bassam, 50
Kingston, Jam., 143 3
Lagos, 50
Lucea, 50 cs.
Manaos, 221
Mayumba, 2 10 c.
M. Video, 13 7
Montreal, 104
Newcastle, 280
New Plymouth, 30
N. Orleans, 590
New York, 256
Para, 225
Pt. Elizabeth, 8 19
Portland, 100
Rangoon, 309
Reikjavik, 72
Rotterdam, 150
Sagua la Grande, 10
Sapeli, 6
Shanghai, 1 6
Sherbro, 166 10
Sierra Leone, 350
Sydney, 270 3,000 cs.
Valparaiso, 2
Wellington, 85

Salt Cake—

Antwerp, 120 t. £156
Barranquilla, 2 17 c. 13
Delagoa Bay, 5 7 13
Hong Kong, 2 10 7
Leghorn, 150 294
Malta, 6 8 15
Philadelphia, 25 15 42

Saltpetre—

Maranham, 1 t. 9 c. 2 q. £32

Satinite—

Copenhagen, 7 t. 11 c. £40

Sheep Dip—

B. Ayres, 24 t. 8 c. 1 q. £550
Natal, 220 dms. 50

Soap—

Attoabee, 4 bxs.
Algoa Bay, 1,255 26 cs.
Batavia, 1,000
Belize, 125
Bayin, 200
Bombay, 5 16
Boma, 61
Buguma, 200
Cairo, 100
Calcutta, 5
Callao, 7
Cameroons, 150
Canaria, 670
Cape Mount, 25
C. C. Castle, 200
Cape Town, 1,650
Christiania, 200
Colombo, 10
Constantinople, 6
Conakry, 50
Delagoa Bay, 10
Dixcove, 300
Dunedin, 2 tanks
Durban, 200
E. London, 650 8
Gibraltar, 350
Iquitos, 200
Kurrachee, 1
Lagos, 223
Landana, 25
Lyon, 50
Malta, 30
Mayumba, 25
Mexico City, 1
Palma, 1,500
Para, 1,000
Penang, 456
Pt. Elizabeth, 305
Pt. Natal, 2,560
Pram Pram, 50
Rangoon, 1,610
Rawal Pindi, 12
Rotterdam, 437
St. John's, 150
Salonica, 50
San Francisco, 1
Shanghai, 7
Sierra Leone, 200
Singapore, 295
Smyrna, 145
Sourabaya, 500
Sydney, 6,000
Teneriffe, 1,798
Tientsin, 13
Tongshan, 40
Trinidad, 875
Valparaiso, 200
Vera Cruz, 2
Volo, 15
Wellington, 4 1

Soap Lyes—

Hamburg, 10 dms.
New York, 160
Rotterdam, 50

Soda Ash—

Amsterdam, 1,300 bxs.
Ancona, 20 bgs. 10 cks.
Antwerp, 1,052
Boston, 499
B. Ayres, 100 kgs. 140
Calcutta, 500 440
Callao, 35
Christiania, 440 bgs. 25
Deftshaven, 350
Genoa, 1,323
Ghent, 333
Hiogo, 445
Hong Kong, 72
Jaffa, 20 brls.
Johannesburg, 40 kgs.
Kingston, Jam., 7
Kobe, 117
Leghorn, 50 bgs.
Maranham, 86
Nansur, 2,600
Naples, 30
Oporto, 18 9
Philadelphia, 580 65 tcs.
Piræus, 70 brls.
Pt. Adelaide, 49
Puerto Cabello, 12
Rio de Janeiro, 8
Rotterdam, 50
Salonica, 160
Santander, 63
Schiedam, 750
Savona, 50
Smyrna, 300
Sydney, 309
Syra, 100
Toronto, 750
Trieste, 100
Valparaiso, 100
Venice, 805 187
Vera Cruz, 25
Willsbroeck, 600
Yokohama, 100
Zanzibar, 16

Soda Crystals—

Alexandretta, 10 brls.
Alexandria, 330
Arica, 10
Barcelona, 30
Bombay, 500 kgs.
Calcutta, 30
Delagoa Bay, 30
Durban, 40
Gibraltar, 30
Jaffa, 12
Kerasun, 10
Piræus, 75
Pt. Natal, 50
Pt. Said, 30 cks.
Trinidad, 34
Valparaiso, 100
Varna, 15

Sodium Bicarbonate—

Algoa Bay, 120 bgs. / 20 kgs.
Antwerp, 45
Bordeaux, 80
B. Ayres, 10
Calcutta, 1,000 7 cks.
Canea, 10 bgs. / 20 kgs.
Christiania, 20
Copenhagen, 35 pks.
Delagoa Bay, 10 bgs.
Genoa, 5 cks.
Halifax, 100 dms.
Havre, 50 kgs.
Hiogo, 400
Johannesburg, 114
Leghorn, 20
Malaga, 50
Malta, 12
M. Video, 45
Mossel Bay, 10 bgs.
Odessa, 200 kgs. 500
Pernambuco, 10
Pt. Natal, 44
Rangoon, 25
Rouen, 396
Singapore, 5 cks
Sydney, 100 bgs. / 250 kgs.

Tampico, 200
Toronto, { 200 300 dms. 5 cks.
Valencia, 12
Vera Cruz, 10
Wellington, 50

Sodium Carbonate—
Barcelona, 20 cks. 305 dms.

Sodium Chlorate—
Amsterdam, 100 kgs.
Antwerp, 15
Hamburg, 30 cks.
Rotterdam, 60 kgs.

Sodium Hyposulphite—
Callao, 140 kgs.

Sodium Nitrate—
Santander, 8 bgs.

Sodium Prussiate—
Valleyfield, 50 cks.

Sodium Silicate—
Kingston, 10 brls.
Nantes, 15 dms.

Sodium Sulphate—
Bombay, 32 cks.
Vera Cruz, 70

Sulphur—
Calcutta, 6 t. £28
Gothenburg, 25 103
Maceio, 14 c. 3 q. 5
Newfairwater, 30 129
Pernambuco, 2 17 20

Superphosphates—
Adelaide, 116 t. £339
Castellon, 39 7 c. 101
Malaga, 25 71
Valencia, 327 16 2 q. 813

Tartaric Acid—
Buenaventura, 1 c. 1 q. £7

Varnish—
Alexandria, 1 cs.
Barcelona, 2 brls.
Matadi, 3 dms.
Piræus, 3 cs.
Seville, 8 cks. 1

Zinc Chloride—
Bombay, { 19 t. 2 c. 6 cks. £293

MANCHESTER.

Week ending January 4th.

Alum—
Germany, 27 cks.

Ammonium Sulphate—
Stettin, 286 bgs.

Anido Salts—
Switzerland, 32 cks.

Aniline Colours—
Holland 2 cs.

Chemicals *(otherwise undescribed)*
Dusseldorf, { 6 kgs. 2 cks.
Mulheim, 3

Coal Products—
Napthol Salts
Switzerland, 6 cks.
Pitch
Belgium, 2,348 c.
Marseilles, 858 t.
Tar Oil
Belgium, 10 cks.
Toluol
Germany, 40 dms.

Colours—
Belgium, 2 cks.

Extracts—
Germany, 10 cks.

Magnesium Sulphate—
Germany, 1 ck.

Sodium Naphthionate—
Switzerland, 12 cks.

HULL.

Week ending December 31st.

Ammonium Sulphate—
Stettin, 500 bgs.

Bleaching Powder—
Norrkoping, 122 cks.

Caustic Soda—
Riga, 128 dms.

Chemicals *(otherwise undescribed)*
Amsterdam, 14 cks. 18 btls.
Antwerp, 6
Bergen, 3 351 slbs.
Christiania, 2 cs.
Copenhagen, 22 8 ks.
Drontheim, { 298 bgs. 10 cks.
Gothenburg, 1 20
Hamburg, 10 20
Rotterdam, 18 48
Rouen, 68 bgs.
Stettin, 10

China Clay—
Christiania, 100 bgs.

Cottonseed Oil—
Amsterdam, 1,110 c.
Antwerp, 609
Bremen, 35
Copenhagen, 379
Dunkirk, 154
Hamburg, 285
Konigsberg, 64
Rotterdam, 1,431
Rouen, 1,704
Stockholm, 21

Dyestuffs *(otherwise undescribed)*
Amsterdam, 90 bls.
New York, 11 cks.
Stettin, 60 bgs.

Linseed Oil—
Antwerp, 188 c.
Bergen, 18
Christiania, 248
Drontheim, 17
Ghent, 7

Manure—
Dunkirk, 923 bgs. 500 sks.

Paint—
Antwerp, 38 cks.

Painters' Colours—
Amsterdam, 5 cks.
Antwerp, 203 21 dms.
Copenhagen, 18 1 cs. 4
Drontheim, 20
Dunkirk, 2
Gothenburg, 5 pks.
Hango, 45 dms.
Hamburg, 8 2
Konigsberg, 9
New York, 25
Rouen, 2
Riga, 1
Rotterdam, 8 1
Stettin, 6
Stockholm, 1

Pitch—
Antwerp, 346 t.
Dunkirk, 220

Salt—
Bergen, 60 cs.

Soap—
Amsterdam, 38 cs.
Christiania, 100
Copenhagen, 1
Rouen, 5

Soda—
Abo, 20 cks.

Starch—
Copenhagen, 100 cs.

Tallow—
Amsterdam, 13 cks.
Riga, 43

Tar—
Rotterdam, 11 cks.

Turpentine—
Antwerp, 2 cks.

Varnish—
Amsterdam, 1 cs.
Antwerp, 4 cks. 1
Gothenburg, 2

GLASGOW.

Week ending January 5th.

Alkali—
Dunedin, 5 t. 19 c.

Alumina Sulphate—
Dunedin, £27 10s.

Ammonium Sulphate—
Baltimore, 237 t. 10½ c.
Barcelona, 2 10½
Hamburg, 263 11
Valencia, 381 16¼

Aniline Colours—
Barcelona. £64

Bleaching Powder—
Dunedin, 86 t. 5 c.

Borax—
Auckland, £78 15s.
Fremantle, £25
Wellington, 28

Caoutchouc—
Amsterdam, £9 11s.

Coal Products—
Benzine
Bordeaux, £357
Creosote Oil
Bayonne, £1,200
Pitch
Bombay, £125 7s.
Calcutta, 40 5
Tar
Bombay, £141 10s.
Boston, 50
Calcutta, 192 12
Madras, 32 10

Extracts—
Barcelona, £69
N. Zealand, £172 8s.

Glue—
Dunedin, £28

Linseed Oil—
Calcutta, 16 c. 8 lbs.
Hong Kong, 6 t. 4¼
Napier, 1 4¼
Singapore, 2 5

Litharge—
Amsterdam, £38
Christiania, 130
Johannesburg, 25

Magnesium Sulphate—
Christiania, £31

Mica—
Hamburg, 5 c.

Paint—
Bombay, £350
Colombo, 52
Dunedin, 44

Painters' Colours—
Auckland, £329
Boston, 142
Calcutta, 62
Cape Town, 60
Dunedin, 49
E. London, £114 14s.
Hong Kong, 104 10
Kobe, 30
Rangoon, 199
Singapore, 85 18
Wellington, 144 18

Paraffin Wax—
Barcelona, £429
Christiania, 34

Plumbago—
Hong Kong, £50

Potassium Bichromate—
Amsterdam, £180
Hiogo, 150

Potassium Cyanide—
Fremantle, 27 t. 4¼ c.
Perth, £176

Rosin Oil—
Christiania, £11

Sheep Dip—
Dunedin, £300
The Bluff, 200

Soap—
Bombay, 1 t. 2¾ c. 27 lbs.
E. London, 6 10
Rangoon, 2
Wellington, 5 15

Sulphur—
Calcutta, £21 15s.
Dunedin, 7 t. ¾ c.

Sulphuric Acid—
Rangoon, £320 16s.

White Lead—
Amsterdam, £5
Dunedin, 103
Invercargill, 72

TYNE.

Week ending December 31st.

Alkali—
Amsterdam, 3 t. 8 c.
Hamburg, 2 13
Reval, 5 3
Rotterdam, 8 16

Ammonium Chloride—
Seville, 12 c.

Ammonium Sulphate—
Valencia, 575 t.

Antimony—
Antwerp, 2 t.
Rotterdam, 6

Arsenic—
Christiania, 1 t. 18 c.

Barium—
Rouen, 15 t. 16 c.

Barium Carbonate—
Hamburg, 1 t.

Bleaching Powder—
Amsterdam, 40 t. 16
Antwerp, 10 1
Bergen, 7 9
Christiania, 2 1
Drontheim, 9 19
Hamburg, 6
Rotterdam, 21 2

Caustic Soda—
Amsterdam, 1 t. 10 c.
Barcelona, 33 17
Hamburg, 1 2
Harlingen, 7 10
Reval, 20 13

Litharge—
Antwerp, 11 c.
Hamburg, 3 t. 2
Lisbon, 1 7
Rotterdam, 11

Magnesia—
Antwerp, 11 t. 1 c.
Hamburg, 2 6
Lisbon, 13
Reval, 1

Paint—
Copenhagen, 10 c.
Hamburg, 2 t. 5
Stavanger, 2

Painters' Colours—
Hamburg, 3 cs. 3 c.

Pitch—
Rouen, 20 t.

Salt—
Nice, 2 lbs.

Soap—
Copenhagen, 5 c.

Soda—
Amsterdam, 40 t. 9 c.
Christiania, 15 4
Rotterdam, 19 19
Seville, 10 1

Sodium Silicate—
Seville, 20 t. 1 c.

Sodium Sulphate—
Antwerp, 100 t.
Drammen, 100
Seville, 18 c.

Superphosphates—
Valencia, 260 t.

White Lead—
Hamburg, 1 t. 11 c.

Zinc Ashes—
Rotterdam, 4 t. 9 c.

GOOLE.

Week ending December 28th.

Alkali—
Antwerp, 1 ck.

Coal Products *(otherwise undes.)—*
Amsterdam, 44 cks.
Antwerp, 9 5 dms.
Boulogne, 50 6 cs 14
Ghent, 1 2
Rotterdam, 5

Logwood—
Hamburg, 30 t.

Manure—
Boulogne, 65 bgs.
Ghent, 282

Painters' Colours—
Antwerp, 1 cs.
Boulogne, 6 tins 2
Ghent, 1 ck.
Rotterdam, 10

Pitch—
Antwerp, 834 t.

GRIMSBY.

Week ending December 31st.

Caoutchouc—
Malmo, 3 cs. 1 pk.

Chemicals *(otherwise undescribed)*
Dieppe. 12 cs.

Coal Products *(otherwise undes.)—*
Antwerp, 5 btls.
Dieppe, 136 cks. 3 pks.
Hamburg, 15 btls.

Painters' Colours—
Antwerp, 10 cks. 1 cs.
Dieppe, 1 kg.
Hamburg, 5
Malmo, 3 cks.

PRICES CURRENT.

WEDNESDAY, Jan. 11, 1899.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. *at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.*

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9	&	8/3
,, Glacial .. .. ,,		35/-	
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¼
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	9
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	0	11½
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	0
Arsenic, white powdered .. .. nett per ton	16	10	0
Alum, loose lump .. .. ,,	4	5	0
Alumina Sulphate (pure) .. .. ,,	3	15	0
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¼ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2¾
,, = 24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	19	0	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	10	6	3
,, ,, (grey) Hull .. .. ,,	10	7	6
Aniline Oil (pure) .. .. per lb.	0	0	4¾
Aniline Salt ,, ... ,,	0	0	4¼
Antimony .. .. per ton	36	15	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	4	10	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	5	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizatine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30% A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	9
,, 50/90 ,, ... ,,	0	0	9
Carbolic Acid (crude 60°) .. .. ,,	0	1	11
,, (crystallised 40°) .. .. .. per lb.	0	0	6¾
,, (liquid 95/97%) .. .. .. per gallon	0	1	0
Creosote (ordinary) .. .. ,,	0	0	2⅞
,, (filtered for Lucigen light) .. .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	2	0
Solvent Naphtha, 90% at 160° .. .. per gallon	0	1	2
Copper .. .. per ton	60	15	0
,, Sulphate .. .. ,,	19	15	0
,, Oxide (copper scales) .. .. ,,	47	10	0
Glycerine (crude) 80% .. .. ,,	24	0	0
,, (distilled S.G. 1250°) .. .. ,,	48	10	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	2	6
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	14	15	0
,, Litharge Flake (ex ship) .. .. ,,	16	5	0
,, Acetate (white ,,) .. .. ,,	25	0	0
,, ,, (brown ,,) .. .. ,,	17	15	0
,, Carbonate (white lead) pure .. .. .. ,,	17	10	0
,, Nitrate .. .. ,,	20	0	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	7	6
,, ,, (grey) (ex ship) .. .. ,,	7	15	0
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton	9	10	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	16	0	0
,, Borate .. .. per cwt.	2	2	6
,, Ore, 70% .. .. per ton	3	10	0
Methylated Spirit, 61° O.P .. .. per gallon	0	2	0
Naphtha (Wood), Solvent .. .. ,,	0	2	10
,, ,, Miscible, 60° O.P. .. .. .. ,,	0	3	9
Oils:—			
Cotton-seed .. .. per ton	15	10	0
Linseed .. .. ,,	18	10	0
Stearine .. .. ,,	26	0	0
Phosphorus (Yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	0	0
,, Chlorate .. .. per lb.	0	0	3⅜
,, Cyanide, 98 % .. .. ,,	0	1	0
,, Hydrate (Caustic Potash) 90 % .. .. per ton	22	0	0
,, ,, ,, 75/80 % .. .. ,,	17	15	0
,, Potash Hydrate Liquid 50 % .. .. .. ,,	10	5	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	2	12	6
,, Prussiate Yellow .. .. per lb.	0	0	7
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	0
,, Muriate, 80 % ,, ... ,,	8	15	0
Silver (metal) .. .. per oz	0	2	3¼
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % .. nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	5	0
,, ,, (Carb. Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Soda Crystals) .. .. .. ,, ,, (f.o.r. w'ks.)	2	10	0
,, Acetate (ex-ship) .. .. ,,	12	10	0
,, Arseniate, 45 % .. .. ,,	13	0	0
,, Chlorate .. .. per lb.	0	0	3¾
,, Borate (Borax) .. .. nett per ton	16	0	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton (10 ton lots)	7	12	6
,, ,, (74 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,, (10 ton lots)	6	17	6
,, ,, (60 % Caustic Soda) .. ,, ,, (10 ton lots)	5	17	6
,, ,, (pure liquor 90° Tw.) .. ,, ,, (10 ton lots)	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25 % .. .. ,,	16	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	6
,, Nitrite, 98 % .. .. per ton	25	0	0
,, Phosphate .. .. ,,	10	7	6
,, Prussiate .. .. per lb.	0	0	5⅜
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	7	6
,, Stannate, 40 % .. .. per cwt.	2	15	0
,, Sulphate (Salt-cake) .. .. per ton	1	8	6
,, ,, (Glauber's Salts .. .. .. ,,	1	10	0
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	4	15	0
Strontium Hydrate, 100 % .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. .. per lb.	0	0	5¾
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton	7	0	0
,, (Roll Brimstone) .. .. ,,	6	0	0
,, Brimstone: Best quality .. .. ,,	4	12	6
Superphosphate of Lime (26 %) .. .. ,,	2	10	0
Tallow .. .. ,,	23	10	0
Tin Crystals .. .. per lb.	0	0	6¼
,, English Ingots .. .. per ton	98	0	0
Zinc (Spelter) .. .. ,,	24	12	6
,, Chloride (solution, 100° Tw.) .. .. .. ,,	7	5	9
,, Sulphate, Crystal .. .. ,,	6	15	0

THE

CHEMICAL TRADE JOURNAL

AND

OIL, PAINT and COLOUR REVIEW.

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LATE ADVERTISEMENT.

VATS FOR SALE.—We have Six English Oak Vats, size from 350 barrels to 450 barrels each; also two about 100 barrels each.—Particulars, Brightwells, Coopers and Dealers in Old Casks, Burton-on-Trent.

Notices.

All communications for the *Chemical Trade Journal* should be addressed, and Cheques and Post Office Orders made payable to—

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Communications for the Editor, if intended for insertion in the current week's issue, should reach the office not later than **Tuesday morning.**

Readers are invited to forward items of intelligence, or cuttings from local newspapers, of interest to the trades concerned.

Readers will oblige by making their remittances or subscriptions by Postal or Post Office Order, crossed and payable to "Davis Bros."

Articles, reports, and correspondence on all matters of interest to the Chemical and allied industries, home and foreign, are solicited. Correspondents should condense their matter as much as possible, write on one side only of the paper, and in all cases give their names and addresses, not necessarily for publication. Sketches should be sent on separate sheets.

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Prepaid Advertisements of Situations Vacant, Premises on Sale or To be Let Miscellaneous Wants, and Specific Articles for Sale by Private Contract are inserted in the *Chemical Trade Journal* at the following rates:—

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Trade Advertisements, Announcements in the Directory Columns, and all Advertisements not prepaid, are charged at the Tariff Rates, which will be forwarded on application.

Advertisements intended for insertion in the current week's issue should reach the office by **Thursday morning** at the latest.

CURRENT TOPICS.

CONSOLIDATING BORAX INTERESTS.

THIS week subscriptions have been invited for shares in a company entitled "Borax Consolidated, Ltd.," which has a share capital of £1,400,000., in addition to which £1,000,000. 4½ per cent. first mortgage debenture stock has been created.

The actual issue comprised £800,000. 4½ per cent. first mortgage debenture stock, and £800,000. 5½ per cent. cumulative preference shares of £10. each.

Rumours have long been current that something in the way of a borax combine, or the consolidation of producers, would shortly take place, and now that this rumour has assumed definite shape, it is interesting to note what centres of production are to be included in the "Borax Consolidate" concern. In all, four businesses are to be amalgamated, namely, The Pacific Borax and Redwood's Chemical Works, Limited, The Borax Company, Limited, The Société Lyonnaise des Mines et Usines de Borax, and Mear & Green, Limited. These businesses have control of about ten sources of crude borates, which we will enumerate according to their ownership. From the Pacific Borax and Redwood's Chemical Works, Limited, the new concern will acquire four borate deposits, two in California and one each in Nevada and Oregon, which properties comprise about 31,000 acres, and also the refining works at Alameda, on the Bay of San Francisco; those at Bayonne, New Jersey (which are now nearly completed); and the English refining works at Belvedere, Kent. The deposits and paid up shares of the San Bernardino Borax Mining Co., of Southern California, will also be taken over.

Messrs. Mear & Green's property consists of the refinery at Kidsgrove, Staffordshire, the refinery and chemical works known as "Wepre Chemical Works," at Connah's Quay, Flint, and the potter's fritt and glaze mills, Tunstall, Staffs. The Société Lyonnaise des Mines et Usines de Borax and the Borax Co., Ltd., contribute the boracite mines in the Vilayet of Khudavendghar, Asia Minor, near the port of Panderma, Sea of Marmora, held under a concession from the Turkish Government for 99 years from the 1st October, 1889, of an area of 2,440,000 square metres, with all plant and machinery, and the deposit at Karassi, Asia Minor, held under a concession from the Turkish Government for 50 years from June, 1887, and three refineries, one at Maison's Lafitte, near Paris, one at Lyons, and one at Vienna.

Chilian and Peruvian companies will also contribute seven borate deposits and three calcining plants, the Chilian deposits including those at Ascotan, Carcote, Cocapilla, Iquique, and the so-called "Chilicolpa" deposit, near Tacna; while in Peru the extensive deposits at Arequipa, which are now only partially worked by two companies, will be taken over.

In addition to these properties, which are all being worked

more or less, the new company have options on various borate properties in South America.

Such in brief are the properties which will now be under the control of "Borax Consolidated, Limited." An interesting contribution to our knowledge of the position of the borax market is given this week under our Reports of Companies, though the logic of some of the deductions made from the arguments which are employed to prove that present prices are not artificial is shaky. As far as we know, prices are on a fairly natural basis, and borax has risen about £3. 10s. 0d. per ton within the last four months; but market values are often inclined to be unreliable when the interests of those connected with any particular article are being "consolidated." We think, therefore, that arguments (either favourable or otherwise), which are based on recent and current prices ought to be tabooed.

WORKMEN'S COMPENSATION AND ACCIDENTS.

We do not think six months is a sufficiently lengthy period to judge an Act of Parliament by, but the official returns of accidents for the last half of 1898 are not very promising. As far as the figures go they bear out the contention that universal compensation leads to carelessness, and therefore to enlarged mortality, as the experimental legislation of Germany and Austria has proved. The Board of Trade returns now show us a startling increase in the number both of fatal accidents and of accidents which were not fatal. In the former it is 12¼ and in the latter 43 per cent. As regards the second class, it may be said that they are now more carefully notified, and that therefore the rise is rather apparent than real. But this cannot be said of the deaths that involve inquests, and have always been reported. Whereas in factories which are subject to the Act the injuries were 18,000 in the second half of 1897 and 28,000 in the corresponding portion of 1898, the deaths rose in the same time from 250 to 330. On railways the increase of deaths was very slight, and in mines not very large. In quarries the deaths rose from 53 to 74, and the number of injuries was nearly doubled.

So far the Act has not conferred additional security for life or limb.

THE MANCHESTER SEWAGE QUESTION.

THE CORPORATION SUMMONS.

AT the Manchester County Police-court, on Thursday, before Mr. Yates, Q.C., and other magistrates, the summons against the Manchester Corporation for pollution of the Ship Canal and River Mersey was down for hearing. Mr. Rhodes, barrister-at-law, who appeared for the Corporation, applied for an adjournment of the summons until April 20th. He understood that the Mersey and Irwell Joint Committee, through Mr. Wilson, were prepared to consent to the adjournment. Last week an inquiry was held by the Local Government Board into the proposals of the Corporation as to the treatment of the sewage. That inquiry was adjourned for three months to allow for the preparation of plans and specifications which the Local Government Board required, and also to permit of further experiments being carried out. The adjournment was on the distinct understanding that at the end of the three months the Corporation should be ready with a complete scheme.

Mr. W. H. Wilson said that on behalf of the Joint Committee, and subject to the approval of the bench, he was agreeable to a further adjournment being taken. When Major-General Crozier adjourned the inquiry he intimated that the Corporation must be ready on the next occasion with all their plans and estimates for a complete scheme.

Mr. Yates suggested that as it was doubtful whether the inquiry would be held on the 13th April or the following week, it would be better to adjourn the summons for a further fortnight.

After further discussion the summons was adjourned until the 4th of May.

COAL PRODUCTION IN FRANCE.

AN interesting report concerning the production of the French collieries and the persons employed in and about the mines has just been published in the "Journal Officiel." During the year 1897 the French collieries produced 30,337,000 tons of coal, including 1,628,000 tons of anthracite, being an increase of 1,608,000 tons, or over 5 per cent. above the amount produced during the previous year. The value of the additional coal produced during the year exceeded 17½ millions of francs. The amount of coal produced in France has doubled since 1868, but compared with the products of other countries the production of the French coalfields is extremely small. In 1897 Great Britain produced 205,364,000 tons, the United States 181,624,000 tons, Germany 120,000,000 tons, and Belgium 21,000,000 tons. In dealing with the position of the French miners the report points out that in 1897 there were 190 aid societies with 158,770 participants, including a certain number of persons not actually employed in the mines, but in kindred trades generally considered as belonging to the collieries. In this way the majority of the mining employés at present belong to some mutual society, a few thousand only being unprovided for either from voluntary abstention or that the number of men was too small to allow of the formation of an associtaion. These societies are governed by a special law, and are in their broad lines the same, providing an indemnity in case of illness and help under certain other circumstances. During the year 1897 the receipts of these various organisations amounted to 5,146,830f. About 60 per cent. of this sum was derived from the amounts withheld from the men's wages, 30 per cent. from the weekly payments, and 6 per cent. as the result of fines inflicted on the men for breaking regulations. A matter of 4,677,279f. was paid out during the year in relief, leaving a balance of 469,551f., which, added to the previous amounts brought forward, form a reserve fund of 1,757,214f. to the credit of these various societies.

INDUSTRIAL REVIEWS OF 1898.

Cleveland Chemicals.—Disappointment has ruled in the chemical industry, with demand slow and falling exports. Prices fell considerably compared with previous years. There have been no marked changes or extensions. The demand for Cleveland salt was lower than for ten years past, and with some firms the plant was not fully employed. The chief exports were:—Salt (to December 29), 178,368 tons, against 184,676 tons in 1897; chemicals, 12,586 tons against 16,503 tons; basic slag, 66,187 tons, against 58,301 tons.

Tallow.—The tallow market had no violent fluctuations during the year. At no time did prices advance more than 6d. within one week, and the utmost limits of the fluctuations did not exceed 2s. 6d. per cwt. Prices were slowly but steadily advancing during the greater part of the year, but in June, when North American tallow was freely offered everywhere, and home tallow was very abundant in this market, a check to the advance took place. The supplies of the better qualities of beef tallow were, on the whole, unequal to the demand, while fine mutton tallow scarcely met with a demand equal to the supply. Australian tallow, suitable for ordinary stearine contracts, was not plentifully offered at the weekly auctions; and home tallow, prepared for selling on the usual basis, went some way towards meeting the spot demand for this grade. At the close of the year the market was firm, with a good demand. The stock was 20 per cent. lower, and prices were 10 per cent. higher, than at the beginning of the year.

Newcastle Chemicals.—The chemical trade constitutes almost the one exception to the general industrial prosperity on Tyneside during the year. The alkali trade, for which the Tyne was once so famous, appears to be steadily declining, and during 1898 has certainly not improved its position. One large works situated at Tyne Dock has been dismantled, so that now only four remain, and these are entirely in the hands of the United Alkali Company. Being, moreover, all old process works they find it every year more difficult to compete with the new ammonia and electro-process works on the West Coast and the Continent. Production and prices alike have been regulated throughout the year by the United Alkali Company, who have a working agreement with the Continental makers, but for all that there has been an appreciable downward tendency, particularly in bleaching powder, for which there is no syndicate price and which has fallen about £1. to 30s. per ton. This product, which opened the year at £6. 10s., closes at £5.; caustic soda, 70 per cent. strength, which opened at £7. 10s., closes at £7.; soda crystals, which opened at £2. to £2. 15s., closes at £2. 5s.; soda ash, which opened at £4. 5s. a ton for 52 per cent. strength, has remained without change, and still realises that figure; while sulphur has declined from £5. to £4. 15s. a ton.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Sanitary Paints, Varnishes, etc. C. A. Richardson. 56. January 2.
Electrodes for Storage Batteries. T. A. Willard. 101. January 3.
Manufacture of Gas and Lime. J. Spencer. 104. January 3.
Treatment of Filtering and Decolorizing Materials. R. W. Barker. 114. January 3.
Smoke Consuming Furnace. W. H. Heeson 183. January 4.
Utilizing Sulphite Pulp Liquors. C. D. Ekman. 189. January 4.
Paint and Varnish Remover. R. Bryson. 215. January 4.
Manufacture of Sodium Cyanide. G. W. Johnson. 279. January 5.
Casein-lithium Salt, Soluble in Water. C. D. Abel. 283. January 5.
Casein-potassium Phosphate Compounds, Soluble in Water. C. D. Abel. 284. January 5.
Manufacture of Sulphur Trioxide. O. Ismay. 285. January 5.
Furnace for Treating Lead Ores. L. Correa. 304. January 6.
Fire-proofing Wood. The British Non-flammable Wood Company, Ltd, and H. V. Simpson. 345. January 6.
Treatment of Gelatine, etc. J. W. Bevan. 365. January 6.
Water-proofing Paint. C. N. Nielsen. 417. January 7.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in Digesters for Treating Fish Offal. T. H. Wymonde, Vancouver, B. C. Eng. Pat. 22,916. November 1, 1898.

The cooker consists of a vertical boiler fitted with a central revolving shaft to which propeller-shaped stirring blades are attached. The boiler is provided with a perforated false bottom. The whole process is conducted under pressure, steam being introduced at the top and bottom, and also at the sides just above the false bottom, so that an accumulation of solid matter is prevented by the incoming steam. There are three figures.

Improvements in the Manufacture of Dioxide of Barium. W. R. Lake, 45, Southampton Buildings, London, W.C. (communicated by La Société Bonnet, Ramel, S Giraud, et Marnas, Lyons, France). Eng. Pat. 19,470. September 13, 1898.

Barium hydrate and carbon are mixed in equivalent proportions (about 16 : 1) and heated to 100° to 150°C. The mixture fuses and forms a magma. This is placed in plumbago crucibles lined with cardboard, and heated to about 1,100C. for 5 to 8 hours. On cooling the anhydrous barium oxide can readily be detached from the skin of carbonised cardboard, and is converted into the dioxide, by passing pure air or oxygen over it, while heated to redness in iron tubes. The resulting product is of a fairly white colour, and contains 86% to 94% of dioxide.

Improvements in the Preparation of Calcium and other Gas-producing Carbides. E. Gearing, "Penshurst," Clarence Drive, Harrogate, Yorks. Eng. Pat. 2,997. February 5, 1898.

The carbide is broken into lumps of moderate size and mixed with tar, which has previously been boiled to expel any moisture. The mixture is formed into briquettes, which are heated in a muffle furnace until the tar is wholly decomposed, the pieces of carbide being held together by the residual porous carbon.

Improvements in the Production of Colloidal Tannates as Disincrustants for Use in Land and Marine Boilers, and for other Purposes. T. H. Cobley, 3, Regent-street, Dunstable, Beds. Eng. Pat. 18,879. September 3, 1898.

Tannin is extracted from canaigre roots, etc., by heating in a vacuum pan with a lye of sodium carbonate or sulphite. Finally the temperature is raised to 150°F. The charge is drawn and the tannin extract expressed between rollers and a sufficiency of colloidal matter added. This colloidal matter is best prepared from waste leather (which has previously been disintegrated), by steeping in a 25% solution of sodium carbonate or sulphite, in the cold. The disincrusting composition is used in the usual way.

Official Memoranda.

(From the Board of Trade Journal.)

THE SICILIAN SUMACH TRADE.

A report has been received from H.M. Consul at Palermo, stating that the firm of J. and V. Florio has in hand the combination of a "pool" or "corner" in the Sicilian sumach trade.

Nearly all the sumach exporters and sumach grinders have accepted the proposals made to them by Messrs. Florio.

The Sicilian crop is estimated at about 32,000 tons annually, and its local value at about £265,000.

The immediate result will probably be an increase in the market price of this article.

The contract governing the scheme is for a period of five years. By that time Messrs. Florio will have absorbed under their marks the various other marks which have so far had a good name in Sicily, and the owners will have lost their individuality.

This scheme is in combination with another project of the same firm to acquire the whole of the Sicilian carrying trade. With the control of the principal products in their hands the firm hopes to be able to ship the produce in its own vessels.

CALCIUM CARBIDE REGULATIONS IN NEW YORK.

A despatch has been received at the Foreign Office from H.M. Consul-General at New York, transmitting a newspaper extract showing the steps which have been taken to regulate the trade in calcium carbide in that city. This substance, from which acetylene gas is made, has only recently been introduced, but now is stored in many sporting-goods and bicycle stores, and also in some large dry-goods houses, since the coming of the gas bicycle-lamp. The acetylene gas is generated by the contact of water with the carbide. In case of a fire in a store containing a quantity of the carbide, the water thrown by the firemen would quickly generate gas and cause an explosion.

According to the new rules, all calcium carbide in transit through the city and on storage must be enclosed in hermetically-sealed iron receptacles, and plainly marked "calcium carbide, dangerous if not kept dry." No single package must exceed 100 pounds. As to the sale of the carbide, not more than twenty pounds, either in bulk or in cartridges, can be stored or kept in any building used for dwelling or mercantile purposes, and this amount can only be kept on a permit obtained from the Fire Department. This permit will provide that all quantities in excess of two pounds shall be in tight, metal packages, and kept elevated at least six inches from the floor, in a fire-proof safe located above the street grade. The manufacture, transportation, storage, sale or use of liquefied acetylene is absolutely prohibited within the limits of greater New York. Provisions are made for the storage of calcium carbide in sealed receptacles in quantities not exceeding 100 pounds in isolated buildings of fire-proof construction, and the storage must be with a permit from the Fire Department, and the entire quantity stored not exceeding 500 pounds in the aggregate.

GOLD OUTPUT IN THE RAND.

A RECORD MONTH AND YEAR.

THE output from the Witwatersrand district during the past month, (in bullion ounces), as cabled by the Chamber of Mines of the South African Republic, amounts to 419,504 ozs., as against 393,310 ozs. for November and 310,712 ozs. for the corresponding month of 1897. From the outside districts 21,170 ozs. are reported, as against 20,207 ozs. for November. The total returns, therefore, made to the Chamber amount to 440,674 ozs., as compared with 413,517 ozs. for the previous month, an increase of 27,157 ozs.

	1895. oz.	1896. oz.	1897. oz.	1898. oz.
January	177,463	148,178	209,832	336,577
February ...	169,295	167,018	211,000	321,238
March	184,945	173,952	232,067	347,643
April	186,323	176,707	235,698	353,243
May	194,580	195,008	248,305	365,016
June	200,941	193,640	251,529	365,091
July	199,453	203,873	242,479	382,006
August	203,573	213,418	259,603	398,285
September ..	194,764	202,561	262,150	408,502
October	192,652	199,889	274,175	423,217
November ..	195,218	201,113	297,124	413,517
December ..	178,428	206,517	310,712	440,674
Total ..	2,277,635	2,281,874	3,034,674	4,555,009

Reports of Companies.

PACIFIC BORAX & REDWOOD'S CHEMICAL WORKS, Ltd.

An extraordinary general meeting of this company was held last week, at Winchester House, Old Broad-street, for the purpose of considering, and, if thought fit, ratifying an agreement made between the company of the one part and Mr. Lafayette Hoyt De Friese of the other part, providing for the sale and purchase of the property and undertaking of the company, with a view to the amalgamation of its business with that of other companies and concerns by the incorporation of a company for the purpose of consolidating the various undertakings; Sir Alexander Wilson (the Chairman of the company) presided.

The Secretary (Mr H. Evan-Thomas) having read the notice convening the meeting,

The Chairman said: Gentlemen, you are aware that by your articles of association your board are fully empowered to enter into all the negotiations to which we ask your ratification to-day, but before entering into these it may be well that I should lead up to some of the reasons which have influenced us in coming to the arrangement we have done. First of all, let me assure you that we have been actuated solely by the desire to add to and ensure the prosperity of the company, and benefit all interested therein. Some of you may say we were doing well enough and why not let well alone? And I flatter myself, we were doing pretty well, and that our success was fairly well realising our expectations. But gentlemen, in a business like ours there are very many things which have to be taken into consideration, and while we recognised that certain conditions had favoured us in the past, it became all the more apparent to us that we should fortify ourselves against an adverse turn of such conditions in the future. I am very confident that we held the best trumps in the game of competition, and those cards will serve us still. On the other hand, the cutting down policy is a tedious process not altogether satisfactory from a dividend-making point of view, and there are other ways of doing away with competition besides "snuffing out." I think we have chosen the best of these, and by amalgamating our business with those companies and concerns which will be associated with and incorporated with us in the future, we will secure a practical immunity from injurious competition without creating a monopoly which, by an undue raising of prices, might lead to undesirable results By the consolidation of various undertakings for the production of the crude material and the refining of borax in its various forms, it is certain also that a great economy in the working can be effected. To carry out this amalgamation it was, of course, necessary that the various constituents of the amalgamation should be placed in one hand. and all agreements to sell the various properties which will constitute the new company have been made in the name of my excellent colleague, Mr. L. H. De Friese, and the one agreement which most closely concerns us to-day provides for the sale to him—to be conveyed by him to the new company—of the business, undertaking, properties, and assets as on the 1st of October, 1898, the profits earned to 30th September, 1898, to remain the property of this company. The considerations for the sale provide, first, for the redemption of the balance outstanding of the first mortgage debentures on terms which I have no doubt will be quite satisfactory to the holders of them, the principal outstanding at the present moment being £94,900.; second, for the repayment of the second debenture loan of £150,000. on the terms on which it was raised, option being given to the holders of both these loans to convert into holdings in the new company on terms which are liberal. With regard to the preference shareholders, provision is made to enable them to convert their holdings in this company into preference shares in the Consolidated Company, on the basis of £12. in shares in the new company for every £10. held in this company, the rate of interest in the new company being 5½ per cent., as against the 6 per cent. hitherto paid. The effect of this is that for every £100. capital now invested the preference shareholders will receive £120.—an increase of 20 per cent. on your present capital holding. While at the difference of interest, the investment brings you in an additional income of 12s. per cent., your principal invested is increased, without cost to you, by 20 per cent. The ordinary shareholders will receive share for share in the new company for their holding in this company, and will benefit by the increase of profit which we confidently expect will result from the amalgamation and increase of the business. The capital of the new company is of course very much larger, being £800,000. in 80,000 five-and-a-half per cent. preference shares, cumulative and preferred both as to capital and dividend, and £600,000. in 60,000 ordinary shares of £10 each, the whole of which is taken by the vendors. In the issue of the new company, provision is also made for the creation of £1,000,000. four-and-a-half per cent. first mortgage debenture stock, of which it is proposed to issue now £800,000., leaving £200,000. in reserve to be issued in the future, as and when required for the purposes of the company. If I have not made myself quite clear to you on all points, I have no doubt that any questions you may have to put to me can be answered by me or by my friend, Mr. Adkin, solicitor to this company, who has devoted, as all of us have done, much time in working out all the details of this amalgamation of interests, which I have no hesitation in saying, with an intimate knowledge of the vast amount of detail which has to be dealt with, is as complete as it is possible to make it. I will read to you the resolution which I am about to submit, but before putting it for adoption I will answer any question you may put to me to the best of my ability. I now beg to move:—"That the agreement dated the 29th day of November, 1898, between the company of the one part, and Mr. Lafayette Hoyt De Friese of the other part, for the sale and purchase of the undertaking of the company, be and the same is hereby ratified, and that the board be authorised to do and perform all acts, deeds, matters, and things necessary to be done in order to carry the same into effect."

Mr. E. J. Halsey, seconded the resolution, which, no questions being asked, was at once put and carried unanimously.

The Chairman then said: Since I came into this room a copy of the *Daily Mail* has been placed in my hands, containing, I will not call it a reflection, but a statement referring to one of the companies which we are absorbing in this amalgamation, and which, no doubt, that company will answer for itself. They say here, "We are not sure, however, that the new company will commend itself to the investing public. We are informed that the present price of borax is fictitious, and this is a matter upon which some light should be thrown before the prospectus s issued. If the borax trade is under a cloud or declining, the investing public should not be asked to furnish funds to trade in it." If that was the case, I should not appear before you now. The price of boras, as I have told you upon former occasions, has been ruling practically for the last three years—since the incorporation of this company at any rate—at the lowest point that it has ever touched, and notwithstanding that fact, we have in the past, as you are aware, made very satisfactory profits. The increase in the trade is a very marked feature. Taking our own business alone — and I am speaking of that because that is what I know and can testify to—the sales of borax in America alone for the year 1894 amounted to 7,341,832 lbs.; in 1895 they amounted to 9,000,000 lbs.; in 1896 to 11,000,000 lbs.; in 1897 to 13,500,000 lbs.; and in 1898 to 17,562,000 lbs.; so that you can see that even in America alone the increased business is almost phenomenal. With regard to the assertion contained in the extract I have read about the price being fictitious, I only know this, that if, as I have already said, the price is at the lowest limit that has ever been known—if that is fictitious, I do not know where the fiction comes in. There is one point which I allude to with some satisfaction, and that is that the management of the company will be a continuity of the old, under which we have done so well. We have in our managing director, Mr. Smith, in America, and Mr. Baker here, two men who know as much about borax as any people connected with the industry, and I believe that when we meet together as an amalgamated company it will be my pleasant duty in the future, as it has been in the past, to record only one continued prosperity for your undertaking.

Surgeon-General De Renzy, in moving a vote of thanks to Sir Alexander Wilson and his colleagues on the board, and also the secretary, for the admirable way in which they had managed the company, said he believed that the new company would have possession of all the most productive tracts of borax in the world, and its great success was a matter of almost absolute certainty.

Sir Arthur Clay seconded the motion, which was carried unanimously.

UNITED STATES MINERAL PRODUCTION IN 1898.

THE following is mainly condensed from the annual statistical summary compiled by the *Engineering and Mining Journal* of New York.

Aluminum.—The production in 1898 was 2,600 tons (1,690,000 dols), against 2,000 tons (1,400,000 dols.) in 1897. The production of this metal continues to be made by one company.

Antimony.—The production in 1898 was 1,100 short tons (188,298 dols.), against 750 tons (107,250 dols.) in 1897. There were two producers, one at San Francisco and one at New York, who obtained their ore supply partly from abroad and partly from Utah, Idaho, Nevada and California.

Cobalt Oxide—The production by one producer was 9,640 lbs, in 1898, against 19,300 in 1897. This came chiefly from Mine la Motte, Mo, matte.

Copper.—The production of copper in the United States reached the great total of 546,367,793 lbs. (243,914 long tons), an increase of 36,177,074 lbs. over 1897. This is nearly two-thirds of the copper production of the world. The exports of copper for the year reached a total of 138,100 long tons, or 56 per cent. of our product. The demand for copper, both at home and in Europe, continued very heavy during the year, and prices increased steadily.

Copper Sulphate.—The production is estimated at 60,000,000 lbs., against 51,012,945 in 1897.

Barytes.—The production of barytes in the United States in 1898 was derived chiefly, as in previous years, from three districts, the vicinities of Hot Springs. N. C., and Lynchburg, Va., and around Mineral Point, Potosi, and Cadet, in Washington County, Mo. The output of the last for the fiscal year ended June 30th, 1898, was reported by the State Mine Inspector as 8,360 short tons. The entire production of barytes in the United States in 1898 is estimated at 30,000 tons. The value of crude barytes at the mines in Washington County, Mo , was from 4·50 dols. to 5 dols. per ton. In Virginia and North Carolina pure lump ore was worth about 4 dols. and washed ore (concentrates) 3·75 dols.

Ground barytes was in steady demand throughout the year, with an upward tendency in price. At the beginning of the year No. 1 domestic sold in New York at 16 dols., No. 2 at 14 dols., and No. 3 at 11 dols. At the end the prices were 18 dols., 16 dols., and 14 dols. respectively. In St. Louis and Chicago prices averaged somewhat lower. The Western market is supplied to a considerable extent with floated, or water sorted, barytes, while none of the products which reach the Eastern market is prepared in this way. At the close of the year a schedule of 14·50 dols. for No. 2 and 16 dols. for floated was established in Chicago and St. Louis. In December it was reported that the barytes grinders of the United States had formed a pool with a view to the establishment of a uniform price list and division of the business.

Formerly there was a large importation of German barytes into New York, but now this business has practically ceased, the difference in quality between it and the best domestic product not being sufficient to outweigh the existing tariff of 5·25 dols. per 2,000 lbs., notwithstanding the advantage in freight rates, which are only 1·50 dols. per ton from Hamburg and Bremen to New York, while Virginia barytes has to pay 2·50 dols. per ton.

Notwithstanding the exclusion of foreign ground barytes, there is still a large importation of "*lithophone*" in which barytes is an important constituent. "Lithophone" is prepared from a mixture of solutions of zinc sulphate and barium sulphide whereby a precipitate of zinc sulphide and barium sulphate is obtained. This contains about 30 per cent. of the former and 70 per cent. of the latter. According to a tariff decision of 1898, under a protest of Gabriel and Schall, this product is assessed for duty at the rate of 1 c. per lb. under classification as paint containing zinc, and not at 1·25 cent. per lb. as white sulphide of zinc, as appraised by the New Bork Custom House.

Bauxite.—The output of bauxite was about the same in 1898 as in 1897, all coming, as heretofore, from Georgia and Alabama. The production of Alabama was about 12,000 long tons, against 13,083 in 1897. The price remained at the same figure as in 1897, being 7 dols. per ton delivered at the works of the consumer, which means 2 dols. to 2 dols. 50c. per ton to the producer. There were four producers, the American Bauxite Company being succeeded by the Dixie Bauxite Company.

Borax.—The production of borax in the United States increased considerably in 1898, most of it coming, as in 1897, from the colemanite deposits of California, while a little was obtained from the marsh deposits of California and Nevada, and a small amount from Oregon. Marsh deposits were worked at Candelaria, Nev., Humboldt, Nev., Amadee, Cal., Lovelocks, Nev., Independence, Nev., and at a point in Oregon about 120 miles northwest of Winnemucca, Nev., from which points shipments are made. All the producers, with two exceptions, sell their product to the Pacific Coast Borax Company, which continues to control this business in the United States.

There was also an increase in the production of boracic acid, which is now made in California by two companies, while a third plant is in course of construction and will be in operation during 1899. The Californian Borax Company was organised to erect works at Borax Lake, Cal., and to operate deposits in San Bernardino, Kern and Inyo Counties. The construction of a plant capable of turning out 100 tons of refined borax per month, located near the old Searles works, was begun, and it is expected that refined borax will be produced at this place early in the Spring of 1899.

The Pacific Coast Borax Company erected a new refinery at Bayonne, N. J., which was put in operation December 20th. The new works, which embody the latest improvements in borax refining apparatus, have a nominal capacity of 1,200 tons per month. They will be supplied chiefly with raw material from California, and will make boracic acid as well as borax. The old works at Alameda, Cal., which have a nominal capacity of 900 tons per month, will continue in operation, although probably on a smaller scale.

The Pacific Borax and Redwoods Chemical Works, Limited, which is the name of the combination of American and English refiners, reported for the year ended March 31st, 1898, a profit of £88,372, an increase of more than 50 per cent. over the previous year. The gain was attributed to the remarkable expansion in business, especially in America, together with a material reduction in the cost of production and a more profitable range of prices since the new American tariff went into effect, whereby the duty was raised from 2c. to 5c. per pound. Improved machinery and additional facilities are expected to lower the cost of production still further. Among other things, a branch line of railroad to the mines has recently been completed, while good results are expected from the new refinery at Bayonne.

During the last quarter of 1898 the American branch of the Pacific Coast Borax and Redwoods Chemical Works reported the largest volume of business in the history of the industry. On January 31st, 1898, the price of refined borax was raised to 7c. per pound, and that of refined lump in sacks to 6·75c, New York quotations. Later in the year an advance of 0·5c. per pound was put into effect, and this price was maintained throughout.

With respect to the future, the indications are for a continued increase in the demand for borax and boracic acid, and the number of industrial purposes to which these and their compounds are applicable. There has been considerable discussion lately in England as to the use of boracic acid as a preservative for food, but the preponderance of evidence seems to be in favour of its use in small quantities as an entirely harmless preservative. However, only a small part of the world's production of borax is consumed in this form, although the packing industries are using considerably larger quantities than heretofore.

Bromine.—The production of bromine in 1898 was 491,681 lbs., against 487,149 in 1897. Part of this was turned out in liquid form and part as bromide of potassium. There was no material change in conditions, this business being controlled by an association of the producers.

Calcium Carbide.—There was a large increase of production. However, this increase was not equal to the consumption, and at the end of the year the company which practically controls this business in the United States was refusing to take orders for export.

Carborundum.—The production in 1898 is estimated at 795 short tons, average value of 200 dols. per ton, against 621 short tons, worth an average of 247 dols. per short ton in 1897. This substance is no longer used entirely as an abrasive, considerable quantities being employed as a substitute for ferro-silicon in steel making. There is only one producer in the United States, its works being situated at Niagara Falls.

Cement.—The Portland cement business experienced a great boom in 1898 and production increased largely, but it was outstripped by consumption and stocks had to be drawn upon heavily. Prices rose materially. The prospect is for a further great increase in production in 1899, since many new works are in course of construction and the older works are being enlarged. The production of natural rock cement will show a small increase, but business was bad both in the Rosendale and the Louisville districts and prices were cut heavily. Several new concerns made plans to go into the slag cement business, but the Portland cement makers apparently do not fear competition from that source.

Chrome Iron Ore.—The chrome iron ore industry of the United States, which for many years has been confined to California, came almost to a standstill in 1897, when the production amounted to only 50 long tons. In 1898 the business ceased completely, at least there was no production. However, there was some exploration for this kind of ore and a discovery was reported on the property of the Tehema County Chrome Company, at Red Bluff, but the low grade of the ore and the existing low price prevented its exploitation. In general this may be said to be the reason for the cessation of the chrome industry in California.

The domestic supply of chrome ore was obtained chiefly from Turkey (Asia Minor) in 1898 as in previous years. Some was also imported from Newfoundland, where the Halifax Chrome Company has had its concentrating works in full operation. The existence of chrome ore in Cuba is reported, and probably some attention will be given to these deposits in the near future. Elsewhere in the world there were no important developments.

Nickel.—We have no statistics of the production of nickel in the United States from domestic ores in 1898, and in the absence of these we estimate it the same as in 1897, *i.e.*, 33,700 lbs. The total production by nickel refiners in the United States, from both Canadian and American ores and including the nickel contents turned out in the form of nickel oxide, was 6,450,000 lbs., against 4,099,300 lbs. in 1897. The average price of nickel in 1898 was 33 c. per lb, against 34·62 c. in 1897.

Quicksilver.—The production of quicksilver in 1898 was 31,000 flasks, of which 30,359 is credited to California. The production in 1897, all of it from California, was 26,079 flasks. The California product averaged 36·40 dols. per flask in value to the producer in 1898 against 34 91 in 1897.

Pumice.—There was a small production in Utah, whence an output of 144 short tons was reported.

Pyrites.—The production in 1898 was 185 293 long tons (574,401 dols.), against 128,468 long tons (379,699 dols.). This was mined in Massachusetts, Virginia, North Carolina, and Tennessee.

There was an increase in the production of each State, the largest increase being in Virginia, which State is to be credited with upwards of two-thirds of the total production.

Soda.—The production of artificial soda in 1898 (soda ash, caustic soda and other products being reduced to a common basis of 58 per cent. soda ash) was 265,000 metric tons in 1898, against 277,072 in 1897. Revised figures may increase somewhat the total for 1898. The falling off was due to the fact that stocks in the hands of makers, which were large at the beginning of the year, were drawn upon heavily. The sales of domestic soda ash were greater in 1898 than in the previous year. The electrolytic soda works at Rumford Falls, Me., were closed down. The works at Saltville, Va ,; Niagara Falls, N. Y.; Syracuse, N. Y.; Wyandotte and Detroit, Mich., were in operation. The new caustic soda plant of the United Alkali Company in Michigan was not at work, but this company made some chlorate.

Sulphur.—The production in 1898 was 2,680 long tons against 1,690 in 1897. The output in 1898 was obtained from Nevada, Utah, and Louisiana. Sulphur mines were worked in Texas and California and an output from those States is expected in 1899.

White Lead.—The business in white lead in the United States in 1898 was less in volume than in 1897; sales were less, and production was less Three principal reasons may be assigned for this falling off: (1) The buyers had increased their stocks on the advancing market in pig lead during the second half of 1897, and at the end of the year the stocks of white lead in distributors' hands were large for the season. (2) In the spring of 1898, the time of the year when white lead is especially in demand, the trade was interrupted by the Spanish-American war. (3) White lead has probably suffered to some extent from the inroads of substitutes in the trade previously held. (4) By the time the Spanish-American war was over, or rather by the time the end of it was in sight, the spring painting season was over.

The effect of the Spanish-American war was felt especially on the Atlantic Coast, within range of a 13-inch gun from deep water. It will be remembered clearly how difficult it was last April to secure tenants for a seaside cottage anywhere between Bar Harbour and Atlantic City, and not only on the immediate seashore, but also for several miles back very little house painting was done. Going inland, the falling off in business was less noticeable, and in the Mississippi Valley the trade was about the same as in 1897. Along the coast business picked up somewhat in the autumn, but undoubtedly a good deal of painting that would have been done naturally in the spring of 1898 was deferred until the spring of 1899.

The production of zinc white and barytes, which are employed as substitutes for white lead, may have increased in 1898 for the reason that contracts for those products were made largely in the winter months and while the prospect seemed bright.

The price of white lead in oil has remained nearly constant throughout the year, the total range of fluctuation not having exceeded 0·25 c. per lb. At the end of the year it closes at 5¼ c. per lb. This shows an advance over 1897, made necessary by increased cost of raw material.

The year closes with bright prospects for the business in 1899. The year 1898 may be said to have been one of general prosperity. Probably there is no branch of industry in this country at the present time in which business legitimately conducted is not showing a profit. The previous year, 1897, was one of unexampled prosperity to the farmers, and a largely increased amount of painting was done that year, when the demand for white lead was greater than ever before in the history of the business. The painting that was not done in 1897, and would naturally have been done in 1898 if it had not been for the war, will probably be done in 1899, and consequently an increased demand is looked for. Stocks of white lead in the hands of dealers are at present comparatively small.

Technically, the production of white lead in the United States continues the same as heretofore. Fully 90 per cent. of the total is made by the old Dutch process, and the entire output of the National Lead Company is produced in this manner. The experience of this company has been that white lead made by the old process possesses qualities of excellence which have not been found possible to obtain with the new quick process. With respect to electrolytic processes, so far as I know none has yet passed beyond the domain of laboratory experiment. While there have been no improvements in the chemistry of the old Dutch process, the works employing it have made numerous mechanical improvements, all tending so reduce the cost of production and improve the quality of the product, which means to increase its durability as a pigment as well as purity of colour.

THE FLASH POINT OF OIL.—On Thursday, this week, Mr. Alex. Ure, Q.C., M.P., member for Broxburn, addressed his constituents, one of the chief heads in his address being the recent inquiry into the proposed new flash point of 100°F. Abel test. It will be remembered that Mr. Ure was a member of the Parliamentary Committee which sat under the late Mr. Mundella, and afterwards under Mr. Jesse Collings. We hope shortly to refer more fully to the opinions of one who has become acquainted with the true inwardness of the Committee's proceedings.

Correspondence.

**** We do not hold ourselves responsible for the opinions expressed by our correspondents.*

(To the Editor of the Chemical Trade Journal.)

FERRIC CHLORIDE.

SIR,—I shall be obliged if you or any of your readers can give me the market price for a strong solution of this, containing, say, 28 per cent. of dry ferric chloride; also what it is chiefly used for and where it is chiefly sold.

Yours, &c.,
CHEMICAL.

CLOSING OF THE ARKLOW CORDITE WORKS.

In connection with the closing of these works, and the consequent discharge of some 300 employés, a special meeting of the Arklow Harbour Commissioners has been held to consider how the port may be opened up to allow Messrs. Kynoch to proceed with the manufacture of explosives. After the Commissioners had met they adjourned to the Courthouse. The room was crowded with the employés of Messrs. Kynoch, who were waiting to hear the result of the Commissioners meeting.—Mr. J. Storey said the Commissioners had done their very best to keep the harbour open, but they could not get adequate support from the Government. They hoped, however, that in the near future a sum of money would be advanced to enable them to purchase a dredger. In the meantime they felt that the best thing to do was to open a private subscription for the purpose of hiring a dredger. The Rev. Mr. Hallowes said he objected to this being made a charitable affair at all. He was of opinion that Lord Carysfort, Lord Wicklow, Kynoch and Co., the owners of the Rock Quarries, and several of the large shipping merchants in the town should back a bill on the Bank of Ireland, where they could obtain the money at 5½, or probably 4½, per cent., if they went the right way about it.—Mr. Troy said that if they borrowed money even at 4½ per cent. the interest would swallow up all the dues, and there would be nothing left to pay the harbour master or for improvements. They had already exceeded their borrowing powers.—After some further discussion the Chairman and Commissioners left the platform, and there were loud cries of "What are you going to do?"—Eventually the employés put into the chair Mr. Roscoe, and the following resolution was unanimously adopted:—"That this meeting protests in the most emphatic manner against the continued neglect of their duties by the Arklow Harbour Board, their inaction being responsible for the present closing of the Cordite Works and Chemical Works, entailing unnecessary suffering and hardship on the wives and families of the employés."

EXPORTS OF ALKALI AND BLEACH.

THE following returns, which are taken from the official foreign and colonial statistics of the United Kingdom, give the amount and value of alkali and bleaching materials shipped to the undermentioned countries for November, 1898, as compared with November, 1897:—

ALKALI.

Port.	1897.	1898.	1897.	1898.
	Cwts.	Cwts.	£	£
Russia	24,629	19,659	7,927	6,454
Sweden and Norway	10,542	18,149	2,206	3,887
Germany	13,058	7,509	2,549	2,303
Holland	19,377	12,500	3,627	2,857
France	5,468	2,532	1,831	847
Spain and Canaries	34,279	36,702	10,982	11,400
Italy	22,104	22,082	6,089	6,196
United States	116,757	64,808	25,333	12,419
Australasia	21,102	12,782	6,361	3,849
British North America	34,624	27,469	8,390	6,397
Other countries	170,230	107,189	46,542	31,365
Total	472,170	331,381	121,837	87,974

BLEACHING POWDER, ETC.

Port.	1897.	1898.	1897.	1898.
	Cwts.	Cwts.	£	£
United States	84,997	66,568	26,348	17,117
Other countries	46,941	44,548	14,768	13,050
Total	131,938	111,116	41,116	30,167

IMPORTS AND EXPORTS FOR DECEMBER.

THE Board of Trade returns for the past month have not been very satisfactory. The *imports* of chemical products are lower on the whole, but so are the *exports* with the exception of alkali which, for once in a way, shows a trifling increase.

IMPORTS OF FOREIGN AND COLONIAL PRODUCE.

ARTICLES.	Quantities. 1897.	1898.
Margarine ..... Cwt.	83,182	83,842
Copper Ore and Regulus..... Tons	11,592	12,407
Pyrites..... ,,	54,545	56,099
Tin ..... Cwt.	53,945	47,339
Alkali ..... ,,	23,265	20,200
Brimstone ..... ,,	59,592	44,329
Dyes, Coal Tar ..... £.	53,860	70,903
Saltpetre ..... Cwt.	17,331	24,951
Petroleum ..... Gall.	17,632,250	23,140,866
Turpentine ..... Cwt.	50,664	2,703
Guano..... Tons.	1,965	6,038
Nitrate of Soda ..... ,,	12,516	136,274
Paraffin Wax..... Cwt.	88,591	213,208
Rosin ..... ,,	141,379	155,622
Tallow and Stearine..... ,,	180,878	4,982
Tar..... Barrels	1,342	48,176
Oil Seed Cake .....Tons.	37,866	36,496
Wood Pulp..... ,,	38,314	590
Borax ..... Cwt.	—	—

EXPORTS OF BRITISH AND IRISH MANUFACTURES.

ARTICLES.	Quantities. 1897.	1898.
Alkali ..... Cwt.	331,576	336,398
Cement .....Tons.	27,044	17,143
Coal and Coke ..... ,,	2,980,092	3,537,887
Copper, all kinds ..... Cwt.	93,752	98,440
Iron and Steel .....Tons.	282,257	238,146
Chemical Manures ..... ,,	28,926	28,382
Oils, seed ..... ,,	4,978	3,977
Salt..... ,,	49,601	38,601

THE POSITION OF SODIUM NITRATE.

THE nitrate "combination" is still in the air, and likely to remain there. Mr. Harvey stated the other day that one dissentient suffices to upset the proposed "convenio," and we could name half-a-dozen who will never consent until "quotas" are fixed in proportion, not to capital and machinery, but to contents and quality of "calicheras." This will not suit the grossly over-capitalised oficinas; therefore the struggle for life may be expected to continue, and meantime the consumer will get cheap nitrate. This desideratum is assured by the enormous shipments prognosticated months ago in these columns, and culminating in a total of 165,000 tons to Europe in December, making the last three months' aggregate up to 540,000 tons against 375,000 in 1897, 305,000 in 1896, and 455,000 in 1895, previously the record quarter. Although last month's imports were only 74,880 tons, against 97,340 in December, 1897, the Permanent Nitrate Committee has thought fit to reduce the deliveries by only 9,600 tons, making the "visible supply" at 1st inst. 713,710 tons, against 644,090 tons a year ago. The quantity "loading," estimated a fortnight ago at 8,000 tons, had increased to 70,000 tons, thus foreshadowing an export in January of at the very least 120,000 tons, of which one half will arrive on this side before the end of April. Adding 30,000 tons by February steamers, the total quantities of nitrate available in the next four months reach 804,000 tons. Corresponding deliveries last year were 642,930 tons, so that the European stocks at 1st May will amount to 100,000 tons, against 48,000. And yet the fear is expressed in trade circulars that the supply is likely to be unequal to the demand!

Heavy increase in consumption can alone prevent collapse. Such increase may reasonably be expected (low prices being a far more effective stimulant than the precious propaganda on which thousands of pounds are annually frittered away by the Permanent Nitrate Committee and the Chilian Government), though it must not be forgotten that both corn and beet-sugar are lower than last year, and that the weather conditions may be less favourable. Stocks in warehouses in Europe at the present time are very light (140,000 tons), but the quantity afloat (570,000 tons) is correspondingly large, and the continuous heavy arrivals will severely tax the powers of importers, who naturally do not wish to store nitrate in the spring months. East winds were so prevalent in the early part of last year that only 81,000 tons arrived in February, and 106,000 tons in March; this year the imports will in any case reach 300,000 tons. It should also be pointed out that the decrease in deliveries in the second half of 1898 implies the existence of more than the usual quantity of nitrate in the hands of German dealers. The position from a holder's point of view is not a particularly happy one, and it will be interesting to watch the course of events, especially in Hamburg. Helped by the low exchange, each successive fall in which is a sweet boon, the nitrate producers are pursuing the uneven tenor of their way and turning out the explosive fertiliser as if there were absolutely no limit to the demand. Despite the stupendous shipments of late, stocks in Chili reach the somewhat unwieldy figure of 6,500,000 quintals (300,000 tons), but the producers will, no doubt, see the advisability of turning off the tap after next month, if only to let the heated machinery cool down. Oficinas with good grounds and aided by a shilling dollar can rub along quite comfortably at 4s. 8d. per quintal, although this does not necessarily mean that dividends can be paid by the Lagunas Syndicate on £1,100,000. plus debentures, or by the company of that ilk eschewing nitrate in favour of litigation.

THE INDIGO MARKET IN 1898.

AT the beginning of 1898 the market was suffering from depression arising from excessive stocks, the outcome of surpluses accumulated during the three previous seasons of abundant crops. In the course of the year increased deliveries and a considerable falling off in supplies have combined to effect a greatly improved statistical position, the stock on December 31 being reduced to 10,203 against 15,636 chests. In ordinary circumstances this alteration would have been accompanied with advancing values, but, mainly through the rumours of further competition from artificial colours, the market failed to respond, and in the July sales prices for most descriptions touched the lowest point on record. Kurpah, the principal exception, maintained its value owing to comparative scarcity. These low prices naturally attracted buyers. The quantity disposed of during the second half of the year to the home trade has been abnormally large, and the fact that deliveries have been taken promptly indicates that cheapness has stimulated consumption. Prices during the last quarter of the year tended upwards, a demand from America for Oude and from the Continent for Bengal helping in that direction.

The Calcutta sales opened on November 24, and have proceeded somewhat slowly, Oude and Benares owners holding out for higher rates than buyers are at present willing to pay. Bengal, which is of better quality than for some time past, has been selling freely at prices about on a parity with London rates, the closing sale before the holidays evidencing a good demand at rather higher prices.

On December 31 the quantity out of the market was 44,500 against 29,000 maunds at the same time last year, of which 1,000 chests have been shipped to London against 750 up to December 31, 1897.

Buyers are now realising that the oft-recurring report of a successful launching on the market of artificially produced indigo at a price to compete favourably with the natural product is still chimerical. It is possible and even probable that an effective substitute will be found for refined indigo, but for all practical purposes the oldest known and most satisfactory natural dyestuff still holds the field, and its supremacy is not likely to be seriously assailed so long as the present low scale of values continues.

The next London sales will commence on the 30th inst., and the declarations are only 3,050 against 7,950 chests in the January sale last year. The falling off is most marked in Kurpah, of which only 650 chests are entered.

The following figures may be of interest:—

IMPORTS.

1898. Chests.	1897. Chests.	1896. Chests.
10,796	18,823	20,303

DELIVERIES.

	1898. Chests.	1897. Chests.	1896. Chests.
Home	10,047	9,275	10,163
Export	6,182	5,385	6,928
Total	16,229	14,660	17,091

STOCK.—December 31.

1898. Chests.	1897. Chests.	1896. Chests.
10,203	15,636	11,473

SOCIETY OF CHEMICAL INDUSTRY—*Liverpool Section.*—The next meeting of this section will be held in the Chemical Laboratories, University College, on Wednesday, January 25th, at 7 p.m. Business:—I.—Miscellaneous communications. II.—Paper on "The action of water on zinc and galvanized iron"—by Mr. Herbert E. Davis.

PROPOSED CALICO PRINTERS' COMBINE.

THE rumours about the proposed great combination among firms engaged in the calico printing trade have some foundation in fact. For a long time the condition of this important industry has been a cause of grave anxiety to those engaged in it. Competition has grown keener and keener. Prices have been cut to an extent which has reduced profit to its vanishing point. Several firms have felt the pinch severely, and they, meeting with the friendly co-operation of firms of higher standing, have made some progress towards putting an end to the worst features of the competitive system. With a view to bringing about an amalgamation considerably more than twenty firms have already agreed to have their businesses valued at their own cost by valuers of repute selected by the promoters of the combination. Other firms, who have not given in their adhesion yet, are disposed to join. Providing an accurate estimate of the value of the businesses can be secured—a consummation which can only be reached by frankness and straightforwardness on the part of all the firms concerned—the combination will become an accomplished fact. It is too early to attempt to fix the probable amount of the capital required, but as the trade is an extensive one and a growing one, it will run well into the millions.

Trade Notes.

DIARIES, &C.—"*Oils, Colours, and Drysalteries*" *Diary and Year Book* for 1899. This excellent diary is included in the annual subscription to this paper. It is arranged with three days to the page, ruled for cash columns, and interleaved with blotting paper. Besides containing numerous useful tables, which are well printed in good, clear type, there is a large amount of commercial and trade information, amongst which may be mentioned a table of colonial import duties, telegraphic addresses and telephone numbers of manufacturers, list of agents, recipes, &c. A ruled chart is added at the end for graphically indicating the fluctuations of the market.—*The Photogram* (Christmas number for 1898) is a special number with extra pages and supplements, issued at the same price as the usual monthly numbers. A feature of special interest is a reproduction of a photograph of the Holy Shroud of Turin, in which the distinct face and figure, supposed to be that of Christ, is portrayed, and a critical article thereon. An obituary notice of Gleeson-White accentuates the loss to the artistic world that his death has caused. The many other articles are all of equal merit to the usual numbers, well up to the usual high standard of this monthly.

RARE EARTHS IN BRAZIL.—Sand from Prado off the coast of Bahia has proved on analysis to be of considerable value in connection with the manufacture of mantles for the incandescent gas light. As is generally known, these mantles consist of a fabric which is impregnated with a solution containing one or more of the "rare earths" in the form of oxides of dydium, cerium, and thorium. The last is the most valuable, and is commonly found mixed with phosphates of various rare metals, the combination receiving the name of monazite. The Prado sand is rich in monazite, which appears to have resulted from the decomposition of the gneiss in the neighbouring district.

FIRE AT A CHESTER LEADWORKS.—An alarming fire occurred shortly before eight o'clock on Saturday night at Chester, at the lead-works of Messrs. Walkers, Parker, and Co., Ltd., who also have works at London, Liverpool, Newcastle-on-Tyne, and Bagillt. The outbreak originated in some unknown manner in the white-lead washhouse, and the flames, making their way through a window into the shot tower, soon seized hold of the interior of that structure. The shot tower is one of the landmarks of Chester, being 266 ft. high, and it is considered to be one of the finest buildings of the kind in the country. The fire crept up the tower with amazing rapidity, bursting through the various windows, and in a surprisingly short time the flames had reached the top of the structure, through which they rose to a great height, presenting a magnificent spectacle. At the top of the tower were two large iron pots, which fell with a loud crash, as did also the flagstaff and a pulley at the top. The tower itself appears to have suffered little damage, but everything in it is destroyed. The white lead washhouse is completely gutted, and the valuable separating and polishing machinery practically ruined. The damage, which is covered by insurance, is roughly estimated at about £5,000. About 300 people are employed at the leadworks, and a third of these will be thrown idle.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are easier at 8d. to 8½d. for 90's and 50/90's. Carbolic acids in fair demand, with prices steady. There is nothing fresh to report in naphthas. Pitch is going into consumption fairly well at 24s., f.o.b. East Coast.

Sulphate of ammonia is firm, and moving well, both for prompt and forward delivery. Beckton quotes February/June £10. 5s. Closing prompt quotations are:—London outside makes, £10 10s., Hull £10. 8s. 9d. to £10. 10s., and Leith £10. 10s. Nitrate of soda steady.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade business is fairly brisk for the principal products. Caustic soda is firmer, but without alteration in the spot quotations, which are as follows:—F.o.b. Liverpool, 77% £7. 12s. 6d., 74% £7. 7s. 6d., 70% £6. 17s. 6d., 60% £5. 17s 6d. per ton. For bleaching powder there is good inquiry, both for home trade and export, and prompt prices free on rails are £4. 5s. to £4. 10s. softwoods, and £5. 2s. 6d. to £5. 5s. for export casks, f.o.b. Liverpool. Chlorates are unchanged at 3½d. for potash, and 3¾d. soda. Ammonia alkali £4. 2s. 6d., bags, f.o.r. Soda crystals, 50s. bags. Bicarbonate, £6. 5s. to £6. 10s. free on rails, according to package. Sulphur firm at £4. 12s. 6d. per ton. For potash, caustic and carbonate, there is a continued good demand, and prices are steady. Sulphate of copper has further advanced to £20. for prompt, and £20. 10s. for February/April. Saltcake is firm at 28s. 6d. per ton in bulk, f.o.r. Brown acetate of lime £5. 7s. 6d. c.i.f.; grey, £7. 17s. 6d. per ton. Other acetates quiet and unaltered. Acetic acid 40% 8s. 6d. per cwt. White powdered arsenic is dearer at £16 10s., and there is a continued good inquiry, with more business doing. In aniline oil and salt there is no improvement to record, and prices remain at 4¼d. and 4¼d. per lb respectively. For carbolic acid the demand is only moderate, and price is unchanged. Prussiate of potash steady at 7d. per lb., and soda 5¾d. to 5½d. per lb.; cyanide, 11d. to 1s. per lb. In sulphocyanides there is only little doing and prices remain low. Tin and zinc salts are dearer. Ammonia salts are firm, but with no recent change in quotations. Bichromate of soda and potash are still freely offered. Borax keeps firm meantime. For chemicals, generally, the demand is fairly good, but not as yet sufficient to affect the prevailing low range of prices.

REPORT ON MANURE MATERIAL.

The market is very firm for all materials, and the tendency of prices is upwards. Quotations for South Carolina and similar grade phosphates are unchanged; but for high grade Florida rock, shippers have again advanced their price for 1899 shipment. There is nothing to report in River Plate bones, the nominal value is about £4. 17s. 6d. per ton, delivered good United Kingdom port. For East Indian bone meal, £5. 7s. 6d. to £5. 10s. per ton, according to description, is now the price, and there is very little offering in any position. Nitrate of soda is firm in all positions, spot value remains at 7s. 7½d. per cwt. for good up to 7s. 9d. per cwt. for refined quality.

THE METAL MARKETS.

LONDON, WEDNESDAY.—Pig iron steady: Scotch warrants closed at 52s. 3d.; Middlesbrough, 46s. 10d. cash; and hematite, 59s. 1d. Copper higher: Chili bars, G. O. B.'s and G. M. B.'s, closed at £63. 16s. 3d. to £64. 1s. 3d. cash, and £64. 2s. 6d. to £64. 7s. 6d. three months. Tin easier: Straits closed at £99. 15s. to £100. 5s. cash, and £100. 5s. to £100. 15s. three months; Australian, £100. 4s. 0d.; English ingots, £103. Lead steady: Spanish, £13. 10s. 0d.; English, £13. 15s.; Silesian spelter, ordinary, £24. 12s. 6d. Nickel, 1s. 2½d. Antimony, £37. 0s. Quicksilver: First hands, £8. 0s.; second hands, £7. 18s. 6d. *Copper shares* steady: Cape, 4 11/16 to 4 12/16; Copiapo, 3 15/16 to 3 16/16; Libiola, 2⅜ to 2⅝; Mason and Barry, 3⅜ to 3⅝; Rio Tinto, 34 13/16 to 34 14/16; Tharsis, 8⅛ to 8⅜.

GLASGOW, WEDNESDAY.—Market strong, and a good business. Scotch done at 52s. 0½d., 51s. 11½d., and 52s 3½d. cash; also at 52s. 3½d. to 52s. 6½d. month; buyers, 52s. 3d. cash; sellers ½d. more. Cleveland done at 46s. 9d. to 46s 10½d. cash, and 47s. 0d. month; buyers, 46s. 10d. cash; sellers, 46s. 10½d. Cumberland hematite done at 59s. 1d. to 59s. 0d. cash; also at 59s. 4d., 59s. 2½d., and 59s. 4½d. month; buyers, 59s. 1d. cash; sellers, near. Middlesbrough hematite idle.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

OILS.—Palm oil is firm and in short supply with Lagos £21. 15s. ex quay and £22. transit. Hard oils £20 5s. Olive is very steady at £30. to £31. per tun for Spanish. Linseed quiet, with sellers offering at 18/6 to 19/- cwt. for Liverpool makes in export casks. Cotton seed rather quieter, though prices remain steady so far at 15/6 to 16/- cwt. Castor oil firm with good seconds Calcutta 3 1/16d., sellers refusing 3d. First pressure French has been done at 3d. per lb. ex quay. Tallow is still commanding full prices. The volume of business doing is rather restricted however. Resin steady and unchanged, prices being well maintained. Spirits of Turpentine are in fairly good request at 32/- cwt. Petroleum steady. American 6 5/16d. to 8d., and Russian Refined 6d. per gallon.

CAKES.—There has been a continued fair business doing in spot parcels of choice Western American linseed, and the full quotation is maintained at £7., but the demand for other imported descriptions has been a shade quieter, with sellers steady at £7. 10s. for both River Plate and Bombay, usual terms, and £7. 10s. to £7. 12s. 6d. per ton for Russian, nett cash. A good demand is still experienced for Liverpool makes at previous full quotations, viz., £8. 5s. to £8. 15s. per ton, according to brand. A fair amount of trading has been concluded in good to choice brands of American decorticated cottonseed, and holders remain firm at £6. to £6. 5s., according to quality, with Liverpool makes selling to a fair extent, and values are still given at £6. 10s. to £6. 15s. per ton, according to brand, but the quantity offering at the lower price is still in a limited compass. Undecorticated Liverpool makes continue to meet a brisk inquiry from consumers, and rates are well supported in the business passing, sellers remaining very firm at £4. 17s. 6d. to £5. 5s. per ton, according to brand. Prime quality Egyptian are still inquired after, but in the absence of supplies the quotation is nominally given at £4 12s. 6d. to £4. 15s per ton.

COLOURS.—Prices are steady, and practically without change. Ochres: Oxfordshire—common £10., medium £12, best £15.; Derbyshire—common 40s., medium 50s., best 60s.; Welsh—best 9os.; seconds, 50s., and common, 18s.; Devonshire, 40s. to 45s.; French, J.C., 65s. Umber: 40s. to 45s. White lead: £16. Red lead unchanged. Venetian red: £6. to £10. Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7; medium, £10.; finest, £20. Zinc oxide: £22. 10s. to £25.;

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—The situation here has not materially altered. Business is moving steady, and prices are little altered. If anything, linseed oil is a trifle cheaper and refined cotton oil a trifle dearer. The Driffield Pure Cake Co. announce a dividend of £4 per cent. per annum, which is about usual. The Yorkshire Agricultural Show will be held here in July of this year, which will possibly give a little fillip to the trade in feeding stuffs here. Linseed oil is quiet, in sympathy with seeds, for which there is little or no business passing, being quoted spot 15s 10½d. to 16s. spot, and month, naked first four months 16s., and same to August; refined and boiled, £1. to £1. 10s. per ton extra. Refined cotton oil in slow demand, 13s. 1½d. naked spot, 13s. 3d. to 13s. 4½d. January-April; 13s. 9d. to 13s. 10½d. May-August; filtered, £1. to £1. 5s. per ton extra. Barrels, £1. 10s. and ordinary casks £1. per ton extra. Turpentine easier, £32. in barrels. Castor oil, extracted here, pure pharmaceutical cold drawn, 29s. per cwt. in barrels; 3¼d. per lb. in cases; first pressure, 27s. in barrels; second pressure, 26s. in barrels. Olive oil easier, £30. to £32. per tun. Olive oil soap, £16. to £18 per ton. Oleines, £17. to £19. per ton. Resins unchanged. Danish butter, 117s. to 120s.; Swedish, 117s. to 120s.; Dutch, 108s. to 114s.; Colonial, 100s. to 109s. American pail lard, 30s. to 31s. Pine oil, 9s. Cod oil quiet, £16. to £18. per ton.

CAKES.—Linseed and cotton cakes have advanced 2s. 6d. per ton, and remain firm thereat, though of cotton cakes the demand is limited, the prices being: Linseed cakes, 95% pure, £8. 2s 6d. to £8. 7s. 6d. per ton. Oilcakes (linseed), £7. 2s. 6d.; Russians, £7. 10s. to £7. 12s. 6d. Cotton cakes firmly held; best makes, £4. 17s. 6d. to £5.; seconds, £4. 13s. 9d. to £4 15s.; decorticated, £6. 10s. to £6. 12s. 6d.; Rape cakes: Black Sea, £4. 2s. 6d.; East Indian, £5. 5s.

PAINTS.—In fair demand, but nothing to affect prices appreciably. The principal firm here announce a dividend of 10 % for the year after passing £1,000. to the reserve.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

Attention continues to be drawn chiefly to the movements in sulphate of ammonia, which is still on the mount so far as prompt business is concerned. Prompt Leith has been done at £10. 12s. 6d., and it is for this figure that most of the makers are holding to-day. For the latter (the makers) the least satisfactory feature of the situation is the entire absence of any anxiety on the part of buyers to secure themselves against forward requirements. These seem convinced that the market is bound to take a turn downwards soon. With regard to the other chemicals there is not much of novelty. Sulphate of copper still rises. Bleaching powder is reported as a little firmer. The others unchanged. Mineral oils and paraffins all strong, at the old prices fully maintained.

Chief prices current are:—Soda crystals, £2. 7s. 6d. to £2. 12s. 6d. nett, Tyne; soda ash, £4. 2s. 6d. to £4. 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 5s. to £4. 15s. nett, Glasgow; caustic soda, white, 74° £7. 7s. 6d., 70/72° £6. 17s. 6d., 60/62° £6., and cream 60/62° £6, all nett, Liverpool; bleaching powder, 35/37°, £5. to £5. 10s. nett, Tyne; saltcake, 28s 6d.; borax, English refined, £16., and boracic acid, £26. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s., nett, Liverpool; bichromate of potash, 3½d., less 3½% for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d., less 3½% for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow); chlorate of potash, 3 5/8d., less 5% Liverpool; nitrate of soda, 7s. 6d. to 7s. 9d.; sulphate of ammonia, £10. 12s. 6d. prompt f.o.b. Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £19. 15s. 0d. prompt, less 5% Liverpool; paraffin scale, hard, 1 5/8d. to 1¾d. per lb., and soft 1¾d. per lb.; paraffin wax, 120° semi-refined, 2d. to 2¼d. per lb.; paraffin spirit (naphtha), 7½d. to 8d. per gal; paraffin oil (burning), No. 1, 6½d.; and crystal, 7d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 15s. to £5. 5s., 885° £5. 10s. to £6., and 890/895° £6. 5s. to £6. 10s. Week's imports of sugar at Greenock were *nil.*

TYNE CHEMICAL REPORT.

TUESDAY.

Chemicals are quiet though the business doing is fairly good for the time of the year. Soda crystals are firm at £2. 12s. 6d. per ton, gross weight, locally. Caustic rather steadier at £7. per ton for 70%, and £7. 17s. 6d. to £8. for 76/77%. Sulphur firm at £4. 15s. per ton.

Bleaching powder, softs, £5. 0s. per ton, nett; do. hards, £5. 5s. per ton, nett; caustic soda, 76/77% £8. and 70% £7. 0s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. 0d. per ton, nett; blanc fixe, £6. 10s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt is steady at 9s. 6d. per ton, f.o.b. Tees with a good demand for common and block qualities.

COALS.—Trade continues firm and there is still a good demand for steam, bunker, and gas coals. Coke also is very firm with an increasing consumption. To-day's quotations are:—Best Northumbrian steam, 10s. 6d. to 11s. per ton; second qualities, 9s 6d. to 10s. per ton; small steam, 4s. 3d. to 4s. 6d. per ton; bunker coals, 9s. to 9s. 6d. per ton; gas coals, 10s. to 11s. per ton; coke, 18s. to 21s. per ton.

New Companies.

Steatite Estates Synd., Ltd.—CAPITAL £6,000., in £1. shares. This company has been formed to acquire, own, and work certain mining properties in the municipal district of Ojen and the village of Mjas, Province of Malaga, Spain, and to adopt an agreement with A. J. Macdonald. The number of directors is not to be less than 3 nor more than 6; the subscribers are to appoint the first; remuneration as fixed by the company.

Chromium Syndicate, Ltd.—CAPITAL £15,000., in £1. shares. This company has been formed to acquire provincial patent No. 20,681 of 1898 for "improvements in the manufacture of sesquioxide of chromium direct from chrome ore," and to carry on the business of manufacturing chemists, reducers of chrome ores, and manufacturers of pigments, mordants, and other dyeing and bleaching materials. The subscribers to the memorandum of association are:—R. W. E. MacIvor, 94, Lancaster-street, S.E., professor of chemistry; T. F. Spencer, 23, Melbourne-grove, E., Dulwich, engineer; G. W. Jones, 1, Rymer-street, Herne Hill, S.E., engineer; M. R. Munns, 218, The Grove, Camberwell, schoolmaster; G. N. Martin, 109, Shenley-road, Camberwell, artist; A. W. Thorn, Weybourne, Walton-on-Thames, advertising agent; W. H. Munns, 125, Grove-lane, Camberwell, patent agent.

Quibell Bros., Ltd.—Capital £150,000., in £1. shares (75,000 5 per cent. cum. pref.). This company has been formed to acquire the business carried on as "Quibell Brothers," at Newark-on-Trent, Notts., and to manufacture and deal in agricultural and all other chemicals and manures, sheep dip, disinfectants, glue, size, gelatine, grease, and soap. The subscribers to the memorandum of association are:—T. O. Quibell, The Grove, Balderton, Notts., merchant; Mrs. S. A. Quibell, The Grove, Balderton, Notts.; O. Quibell, Shalem Lodge, Newark, Notts., merchant; Mrs. E. Quibell, Shalem Lodge, Notts.; W. B. B. Quibell, Highfield, Newark, Notts., merchant; Mrs. E. C. Quibell, Highfield, Newark, Notts.; E. H. Quibell, The Grove, Balderton, Notts, merchant.

Sissons Bros. & Company (of Montreal), Ltd.—Capital £20,000., in £5. shares. This company has been formed to carry on in Canada, and any other country except the United Kingdom, the business of varnish, paint, colour, and oil manufacturers and merchants. The subscribers to the memorandum of association are:—T. H. Sissons, Anlaby, Hull, colour manufacturer; David W. Sissons, North Ferriby, E. Yorks, colour manufacturer; A. T. Hall, Kirkella, E. Yorks., colour manufacturer; H. H. Sissons, North Ferriby, E. Yorks., colour manufacturer; O. H. Sissons, North Ferriby, E. Yorks., clr manufactr.; C. B. Sissons, Anlaby, Hull, clr manufactr.; T. Marriott, 27, De Grey-st., Hull, gent. Reg. office, Sculcoats, Kingston-on-Hull.

William Reynolds & Company, Ltd.—Capital £30,000., in £10. shares. This company has been formed to acquire the business of William Reynolds and Company, Ltd., with certain licences to use the Velocitan process of tanning, and to carry on the business of tanners, leather manufacturers, hide merchants, leather factors, etc. The subscribers to the memorandum of association are:—J. Coxon, Warrington, tanner; H. Densham, Warrington, tanner; J. Hutchings, Warrington, tanner; E. M. Crosfield, Warrington, tanner; W. N. Hutchings, Warrington, tanner; J. P. Reynolds, Warrington, tanner; E. W. Reynolds, Warrington, tanner.

Caledonian Mineral Oil Company, Ltd.—Capital £50,000., in £1. shares. This company has been formed to acquire shale, coal, fireclay, and other minerals, limestone, clay, and raw and unpurified oil, to manufacture the same into oil, paraffin, and other products, and to carry on business as iron masters, colliery proprietors, and engineers The subscribers to the memorandum of association are:—A. J. Macdonald, Balavil, Conan Bridge, Ross-shire, Mem. Lloyd's; G. Canham, 1, York-terrace, E. Twickenham, gentleman; W. Vincent, 20 and 21, Lawrence Pountney-lane E.C., secretary; J. Simpkins, 36, West Hill-road, Wandsworth, accountant; F. W. Archearon, 34, Lesser Avenue, Clapham, S.W., clerk; A. May, 110, Cannon-street, E C., secretary; J. Whamond, 3, Crown Court, E C., chartered accountant.

IMPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.

Week ending January 7th.

Acetate of Lime—			
U. States,	1,034 bgs.	R. E. Drummond & Co.	
Acetic Acid—			
Holland,	164 pks.	A. & M. Zimmermann	
,,	200	R. W. Greeff & Co.	
Germany,	25	Argo S. S. Co.	
Acetone—			
Holland,	10 dms.	Vokins & Co., Ld.	
,,	2	T. H. Lee	
Germany,	£55	,,	
Acids—			
Holland,	63 pks.	Little & Johnston	
Alkali—			
France,	240 c.	J. Harrison & Co.	
U. States,	65	J. Barber & Co.	
Alum—			
Holland,	124 pks.	J. White	
Germany,	100	R. W. Greeff & Co.	
Alumina—			
Germany,	£35	R. W. Greeff & Co.	
Alumina Sulphate—			
Germany,	30 cks.	R. W. Greeff & Co.	
Ammonium Chloride—			
Holland,	19 cks.	H. Lorenz	
Antimony Ore—			
France,	1 t.	Girard Fréres & Co.	
Arsenic—			
Portugal,	145 brls.	Coverley & Westrey	
Asbestos—			
Italy	£285	W. Byford	
Barytes—			
Holland,	24 pks.	O'Hara & Hoar	
Belgium,	132	J. L. Lyon & Co.	
,,	200	Burrell & Co.	
,,	35	P. Jantzen	
Bleaching Powder—			
Holland,	20 cks.	J. M. Steel & Co.	
France,	31	,,	
Bone Meal—			
E. Indies,	150 t.	A. Hunter & Co.	
Bones—			
Sydney,	26 t.	Goad, Rigg & Co.	
,,	4	G. S. Yuill & Co.	
Caoutchouc—			
E. Indies,	7 c.	L. & I. D. Jt. Co.	
Natal,	34	Lewis & Peat	
P.E.Africa,	200	Hale & Son	
Germany,	45	F. Huth & Co.	
Straits,	53	Gilman Brs. & Co.	
,,	37	W. Pope & Co.	
,,	153	Anderson, Weber & Smith	
Germany,	10	Major & Field	
Straits,	670	Jewesbury & Co.	
,,	350	Soundy & Sons	
Germany,	71	Prop. Bull Wf.	
Zanzibar,	21	L. & I. D. Jt. Co.	
Germany,	3	Smith, Sundius & Co.	
Carbolic Acid—			
Germany,	65 pks.	J. G. Back	
Castor Oil—			
E. Indies,	15 cs.	W. Balchin, Ld.	
Italy,	5	L. & I. D. Jt. Co.	
Belgium,	65 brls.	C. & E. Morton	
Caustic Potash—			
Germany,	30 dms.	J. M. Steel & Co.	
France,	5	W. E. Cole	
Belgium,	5 c.	A. J. Luke & Co.	
Caustic Soda—			
France,	100 c.	Carey & Sons	
Chemicals (*otherwise undescribed*)			
Germany,	£530	A. & M. Zimmermann	
,,	37	H. Lambert	
,,	330	L. & I. D. Jt. Co.	
,,	8	Butler's Wf., Ld.	
,,	6	Argo S. S. Co.	
Belgium,	68	T. Palmer	
France,	50	Mory & Co.	
Belgium,	112	John Cockerill Line	
Holland,	5	Hernu, Peron & Co., Ld.	
U. States,	7	T. Meadows & Co	
Germany,	100	R. W. Greeff & Co	
,,	193	Butler's Wf., Ld.	
Holland,	6	T. H. Lee	
N. Zealand,	230	L. & I. D. Jt. Co.	
Coal Products—			
Naphthaline			
Germany,	33 cks.	Fleming's Oil & Chem. Co., Ld.	
Toluol			
Holland,	1 pk.	Pronk, Davis & Co.	
Copper Oxide—			
Germany,	£25	H. Lambert	
Cream of Tartar—			
France,	20 pks.	Fellows, Morton & Co., Ld.	
Italy,	20	Howards & Sons	
,,	41	B. Jacob & Sons	
,,	20	B. & F. Wf. Co., Ld.	
,,	10	W. C. Bacon & Co.	
,,	20	C. Christophersen & Co.	
Spain,	5	B. & F. Wf. Co., Ld.	
,,	5	F. C. Devon & Co.	
France,	2	H Johnson & Sons	
,,	5	M. Ashby, Ld.	
Disinfectants—			
Holland,	30 cks.	R. W. Greeff & Co.	
Dyestuffs—			
Aniline			
Holland,	1 pk.	T. Palmer	
Argols			
Italy,	461 pks.	B. Jacob & Sons	
,,	948	Thames S. T. & L. Co., Ld.	
Cochineal			
Canaries,	4 pks.	Sperling & Williams	
,,	15	L. & I. D. Jt. Co.	
Germany,	7	Beazley & Co.	
Cutch			
Rangoon,	100 pks.	Brown & Elmslie	
Extracts			
U. States,	51 pks.	W. Burton & Sons	
,,	20	W. C. Barnes & Co.	
Austria,	100	Boutcher, Mortimore & Co	
France,	32	Beresford & Co.	
Gambier			
Straits,	469 pks.	Hoare, Wilson & Co.	
,,	251	J Greig	
,,	518	Brown & Elmslie	
,,	550	P. & O. S. N. Co.	
,,	178	Beresford & Co.	
Indigo			
E. Indies,	5 chts.	Croysdale & Co.	
Logwood			
B. H'duras,	245 t.	W. Shelcott & Sons	
Myrabolams			
E. Indies,	250 pks.	L. & I. D. Jt. Co.	
Saffron			
Spain,	1 pk.	J. Knill & Co.	
,,	1	E. Brumlen	
Shumac			
Italy,	58 pks.	T. Harris & Co.	
,,	10	Pickford & Co.	
Germany,	3	Butler's Wf., Ld.	
Italy,	56	R. Davies & Co.	
Tanners' Bark			
Natal,	35 t.	Boutcher, Mortimore & Co.	
,,	70	J. T. Rennie, Son & Co.	
Turmeric			
Germany,	167 pks.	R. Chambers & Co.	
E. Indies,	200	L. & I. D. Jt. Co.	
Farina—			
France,	45 pks.	H. Ewald & Co.	
Germany,	200	R. Bennett & Co	
,,	50	J. Laing, Son & Co.	
Glucose—			
Germany,	200 pks.	200 cwt. Trier, Meyer & Co.	
U. States,	850	5,100 R. G. Hall & Co.	
,,	50	300 E. & T. Pink	
,,	50	298 C. & E. Morton	
,,	100	580 L. Norman & Co., Ld.	
,,	50	275 L. & I. D. Jt. Co.	
,,	50	300 A. B. Curtis & Co.	
,,	100	612 Deering & Robottom	
France,	200	200 ,,	
Germany,	12	94 J. Knill & Co.	
,,	100	100 Pickford & Co.	
France,	200	200 W. E. Cole	
Glue—			
Germany,	£600	Deering & Robottom	
France,	198	Mory & Co.	
Germany,	10	L. & I. D. Jt. Co.	
Belgium,	358	J. E. Kitton	
,,	164	Cotton's Wf.	
Germany,	86	J. Kitchen, Ld.	
Holland,	32	Becker & Wagner	
,,	600	Deering & Robottom	
Holland,	38	Phillips & Graves	
Italy,	502	T. J. & T. Powel.	
U. States,	103	Wingate & Johnston	
,,	90	Armour & Co.	
France,	40	W. J. Davies & Sons	
Belgium,	500	T. M. Duche & Sons	
Italy,	170	,,	
Glue Stock—			
Sydney,	31 bls.	Goad, Rigg & Co.	
,,	645	Anning & Cobb	
E. Indies,	63	Scriven Bros. & Co.	
Germany,	48	Hicks, Nash & Co.	
Sydney,	176	,,	
Melbourne,	76	M. Lampson & Co.	
Germany,	6	Butler's Wf., Ld.	
,,	134	W. Balchin, Ld.	
Glycerine—			
Q'nsland,	£650	H. Hill & Sons	
N. Zealand,	53	R. Bennett & Co.	
Holland,	360	I. Barber & Co.	
Germany,	65	R. W. Greeff & Co.	
Iron Oxide—			
Austria,	14 pks.	O'Hara & Hoar	
Iron Sulphide—			
Germany,	£17	H. Lambert	
Lead Acetate—			
Germany,	£120	F. Bochin	
Lead Sulphate—			
Germany,	£18	H. Lambert	
Litharge—			
Germany,	16 pks.	Butler's Wf., Ld.	
Manganese Ore—			
Germany,	10 t.	C. Hof & Co	
Mercury—			
Spain,	2 btls.	Captain Gibbs	
Italy,	500	L. & I. D. Jt. Co.	
,,	100 flks.	H. Bath & Son	
Methyl Alcohol—			
Germany,	23 dms.	W. Iszard	
France,	7	Lister & Biggs	
U. States,	100 brls.	T. Jones & Co	
Molasses—			
U. States,	300 brls.	1,525 c. Makin & Bancroft	
,,	900	4,901 Falkenburg & Hesse	
,,	250	1,363 J. Forsey	
Ochre—			
Holland,	12 pks.	Phillipps & Graves	
France,	20	A. J. Gay	
,,	208	W. Harrison & Co.	
Spain,	100	J. L. Lyon & Co.	
,,	100	J. Owen	
Italy,	16	W. Harrison & Co.	
Paraffin Scale—			
U. States,	1,063 brls.	Anglo-American Oil Co.	
Paraffin Wax—			
Germany,	7 cs.	T. H. Lee	
U. States,	100 brls.	T. S. Harris & Co.	
Phosphate of Lime—			
France,	255 t.	A. Hunter & Co.	
Phosphate Rock—			
U. States,	1,741 t.	West & Penrose	
Dutch W.I.,	468	G. M. Bauer	
Phosphates—			
Germany,	10 t.	Anglo-Contl. Guano Works	

Plumbago—
Germany, 179 cs. McNamara & Co.
" 73 cks. B. Gallaway
" 36 Butler's Wf., Ld.
" 12 R. Ulrich
" 5 Fellows, Morton, & Co.
Ceylon, 36 brls. W. H. Sampson
U. States, 44 pks. Lunham & Moore

Potassium Carbonate—
France, 172 c. J. A. Reid
Germany, 52 H. Lambert

Potassium Chlorate—
Belgium, 20 kgs. J. W. Drysdale & Co.

Potassium Oxychloride—
Sweden, 200 kgs. G. Boor & Co.

Potassium Permanganate—
Germany, 14 kgs. R. W. Greeff & Co.
" 20 cks. H. Lorenz

Rosin—
U. States, 6,540 brls. H. Hill & Sons
" 150 F. & S. Chiesman & Co.
" 1,050 T. Nickels & Co.
" 200 Moore & Hole
" 1,374 J. Knight & Sons

Salicylic Acid—
Germany, 44 pks. Butler's Wf., Ld.

Saltpetre—
Germany, 42 cks. J. Hall & Son
" 60 F. Smith
" 15 Lucas & Spencer's Wf.
" 280 bgs. H. Grey, junr.
Holland, 50 cks P. Hecker & Co.
E. Indies, 1,171 bgs. Perkins & Homer
" 1,258 Lucas & Spencer's Wf.

Sheep Dip—
Germany, £26 Balfour & Co.

Soap—
Holland, £72 Phillipps & Graves
Italy, 425 W. Balchin, Ld.

Soda—
Holland, 240 c. R. W. Greeff & Co.

Soda Ash—
Belgium, 600 c. A. J. Luke & Co.

Sodium Hyposulphite—
France, 100 c. Carey & Sons
Holland, 35 cks. Typke & King

Sodium Nitrate—
Chili, 11,633 bgs. W. Montgomery & Co.

Sodium Sulphate—
Germany, 30 cks. H. Wallace & Co.

Starch—
Austria, 25 pks. Bellamy's Wf., Ld.
Belgium, 40 C. Tennant, Sons, & Co.
" 236 F. Claydon & Co.
" 155 Leach & Co.
" 200 T. Ronaldson & Co.
" 140 J. Harrison
Germany, 700 Horne & Co.
" 472 Seaward Brs., Ld.
" 6 Butler's Wf., Ld.
" 117 Argo S. S. Co.
Holland, 500 D. R. Wallis
" 1,391 Little & Johnston
U. States, 100 W. G. Taylor & Co., Ld.
" 316 R. G. Hall & Co.
" 2,400 J. Forsey
" 350 Ohlenschlager Brs.
" 34 Dunlop Brs.
France, 201 W. E. Cole

Stearine—
Belgium, 8 cks. T. H. Lee
" 15 Sawer, Sons, & Co.
" 317 pks. H. Hill & Sons
Germany, 10 Contl. F. & S. Agency
France, 400 G. Boor & Co.
U. States, 35 cks. L. & I. D. Jt. Co.

Sulphur—
Spain, 260 t. J. Forster
Italy, 500 Fuerst Brs.

Talc—
Germany, £40 Craven & Co.

Tannin—
Germany, £40 R. W. Greeff & Co.

Tar—
Russia, 108 brls. F. & S. Chiesman & Co.

Tartar—
Italy, 44 pks. B. Jacob & Sons
" 10 Fellows, Morton, & Co., Ld.

Tartaric Acid—
Holland, 12 pks. Kirkpatrick, Barr, & Co.
" 33 F. C. Devon & Co.
" 37 B. & F. Wf. Co., Ld.
Italy, 40 "

Turpentine—
U. States, 2,052 brls. Nickoll & Knight
N. Russia, 51 F. & S. Chiesman & Co.
Queensland, 88 London Oil Strge. Co., Ld.

Ultramarine—
Belgium, 20 pks. J. Harrison
" 6 W. Harrison & Co.
Holland, 10 J. Kitchin, Ld.
Germany, 4 "

Varnish—
Germany, 45 pks. Butler's Wf., Ld.
France, 1 Page, Son, & East

Waste Salt—
Germany, 60 t. Perkins & Homer

White Lead—
Germany, 73 pks. Wilkinson, Heywood, & Co.
" 28 W. A. Rose & Co.
" 6 A. Steadman & Son
Belgium, 98 T. & W. Farmiloe, Ld.
" 24 Perkins & Homer
" 52 G. E. Banes
" 26 J. L. Lyon & Co.
Holland, 81 Perkins & Homer
" 20 A. & M. Zimmerman
" 53 Randall Brs.
" 30 J. Graves

Wood Pulp—
Canada, 1,768 pks. Becker & Wagner
Sweden, 536 W. G. Taylor & Co., Ld.
" 440 Alsing & Co., Ld.
" 523 H. Raby & Mather
" 500 E. J. & W. Goldsmith
Holland, 14 Robinson, Roberts, & Co.
" 28 T. H. Lee
Belgium, 740 D. W. Cork, junr.
" 2,910 P. Heydemann
Norway, 1,600 J. Sharp
U. States, 2,510 Henderson, Craig, & Co.

Zinc Oxide—
Canada, 10 pks. L. & I. D. Jt. Co.
Germany, 20 M. Ashby, Ld.
" 22 J. W. Cook & Co., Ld.
Holland, 24 R. W. Greeff & Co.
France, 20 J. L. Lyon & Co.
" 20 W. E. Cole

LIVERPOOL.

Week ending January 5th.

Albumen—
Hamburg, 1 cs.

Aniline Salts—
Rotterdam, 18 cks.

Barytes—
Antwerp, 200 bgs.

Bones—
Gothenburg, 558 bgs.
Charlotte Town, 138

Castor Oil—
Calcutta, 563 cs. Ralli Bros.
" 400

Colours—
Rotterdam, 3 brls.

Cottonseed Oil—
New York, 50 brls.
Baltimore, 500

Cream of Tartar—
Bordeaux, 44 cks.

Dyestuffs—
Annatto
Rotterdam, 3 crybs.
Cutch
New York, 250 cs. Ralli Brs.
Extracts
Halifax, 110 cks. Boutcher, Bacon & Co.
Hamburg, 20
N'port News, 25 brls.
Philadelphia, 3 kgs.
Madder
Rotterdam, 1 ck.
Myrabolams
Antwerp, 1 pk.
Valonia
Syra, 730 bgs.

Dyestuffs *(otherwise undescribed)*
Barcelona, 1 bl. W. Duranty & Son

Farina—
Rotterdam, 50 bgs.

Glucose—
Stettin, 60 bgs. S. M. Frankenstein & Co.
St. John, N.B., 800 brls.
Boston. 1

Glue—
Rouen, 41 cks. Co-op. W'sale Society, Ld.
Antwerp, 105 bgs.

Glue Stock—
Philadelphia, 7 pks.

Limestone—
Antwerp, 4 crts. J. T. Fletcher & Co.

Litharge—
Rotterdam, 8 cks.

Lithopone—
Rotterdam, 40 cks.

Mica—
New York, 8 brls. Houses Cement Co.
" 4

Molasses—
Alexandria, 1,043 brls.

Paraffin Scale—
Baltimore, 100 brls.

Potash—
Rouen, 98 cks. Co-op W'sale Society, Ld.
Rotterdam, 72
Hamburg, 20

Pyrites—
Huelva, 2,570 t. Matheson & Co.

Saltpetre—
Hamburg, { 50 kgs. 2 brls. 5 bgs.

Soap—
New York, 100 bxs. H. A. Lane & Co.
" 2 cs.
" 300 B. F. Babbitt
Philadelphia, 125 crts. 1,402 cs. 2 pks.

Soapstone—
Bordeaux, 400 bgs. Geo. G. Blackwell, Sons & Co.

Starch—
Antwerp, 186 cs. J. T. Fletcher & Co.
" 512
Hamburg, 148

Stearine—
Rouen, 120 bgs. Co-op. W'sale Society, Ld.
Antwerp, 26 J. T. Fletcher & Co.
Philadelphia, 20 tcs.

Sulphur Ore—
St. John, N.B., 34 bxs. G. H. Harrison

Talc—
Barcelona, 1 cs.

Tallow—
New York, 200 hhds. 100 brls.
Philadelphia, 846 tcs.
Boston, 541 30
" 130 Bigland, Sons & Co
Baltimore, 60
Halifax, 141 brls. T. Nickels & Co.
B. Ayres, 250 pks. Ldn. & Brazil Bank, Ld

Tartaric Acid—
Rotterdam, 5 cks.

Ultramarine—
Rotterdam, 36 cks.

Varnish—
New York, 7 brls. 1 bf. brl. W. A. Warren

White Lead—
Rotterdam, 20 cks.

Wood Pulp—
Lisbon, 1,000 bls.
Halifax, 901 A. Rice & Co.
Rotterdam, 162

Zinc Oxide—
Antwerp, 46 brls.

Zinc White—
Rotterdam, 50 cks.

MANCHESTER.

Week ending January 7th.

Alizarine—
Rotterdam, { 27 cks. 31 brls.

Aniline Salts—
Rotterdam, 4 cks.

Barytes—
Hamburg, 11 cks.

Beta Naphthol—
Rotterdam, 1 brl.

Binitro-Toluol—
Rotterdam, 1 ck.

Chemicals *(otherwise undescribed)*
Hamburg. 30 dms.

Chrome Alum—
Rotterdam, 1 brl.

Chromium Acetate—
Rotterdam, 1 brl.

Colours—
Antwerp, 14 brls.
Rotterdam, 3 kgs. 6 cs. 1 bx.
Rouen, 8 cks.

Cream of Tartar—
Rotterdam, 4 kgs.

Dyestuffs *(otherwise undescribed)*
Antwerp, 9 pks.
Baltimore, 7,000 bgs.

Extracts—
New York, 25 bxs.

Farina—
Rotterdam, 100 bgs.

Glucose—
New York, 50 brls.

Glue—
Antwerp, 4 bls.
Rotterdam, 125 bgs.
Rouen, 55 cs.

Indigo—
Rotterdam, 12 cs.

Lead Acetate—
Antwerp, 11 cks.

Limestone—
Antwerp, 5 crts.
Ghent, 6 cs.

Methylene—
Antwerp, 3 dms.

Mineral White—
Bordeaux, 100 bgs. G. G. Blackwell, Sons, & Co.
" 200 J. & P. Hutchison

Paraffin Scale—
New York, 512 brls.

Pitch—
Hamburg, 67 cks.

Potash—
Hamburg, 39 cks.
Rotterdam, 30
Rouen, 3

Potassium Prussiate—
Bordeaux, 24 cks. J. & P. Hutchison

Pyrites—
Huelva, 1,706 t.

Sodium Nitrate—
Rotterdam, 39 cks.

Sodium Prussiate—
Antwerp, 11 cks.

Starch—
Rotterdam, { 140 cs. 10 bgs.

Stearine—
Antwerp, 26 bgs.

Sulphuric Acid—
Rotterdam, 10 cks.

Tallow—
New York, 100 tcs.

Tannic Acid—
Hamburg, 10 cs.

Tartaric Acid—
Rotterdam, { 10 kgs. 56 cks.

Toluidine Base—
Hamburg, 4 cks.

Wood Pulp—
Rotterdam, 400 bls.

Zinc Oxide—
Antwerp, 6 cks.
Rotterdam, 40 brls.

HULL.

Week ending January 7th.

Asbestos—
Genoa, 56 pks. Wilson, Sons, & Co., Ld.

Barytes—
Antwerp, 53 cks. Bailey & 100 bgs. Leetham, Ld.
" 100 cks. H. F. Pudsey
Bremen, 22
Rotterdam, 48 Hull & Netherlands S. S. Co.

Castor Oil—
Leghorn, 10 cs. Wilson, Sons, & Co., Ld.

Marseilles, 92 pks. ,,
,, 68 cks.

Chemicals *(otherwise undescribed)*
Danzig, 13 cks.
Hamburg, 50 Wilson, Sons, & Co., Ld.
Leghorn, 18 ,,

Colours—
Danzig, 9 cks.
Dunkirk, 1 cs Wilson, Sons, & Co., Ld.
Hamburg, 10 pks. 5 cks. 32 brls. ,,
Rotterdam, 4 bxs. 43 brls. Hull & Netherlands S. S. Co.
,, 3 cks. 1 cs. Wilson, Sons, & Co., Ld
Stettin, 49 cks. ,,

Creosote Salts—
Rotterdam, 4 cks. Hull & Netherlands S. S. Co.

Cryolite—
Copenhagen, 25 cks. Wilson, Sons, & Co., Ld.

Dyestuffs—
Alizarine
Rotterdam, 6 brls. 5 bgs. Hull & Netherlands S. S. Co.
Shumac
Palermo, 1,318 bgs. Wilson, Sons, & Co., Ld.
,, 1,530

Farina—
Hamburg, 100 bgs. Wilson, Sons, & Co., Ld.
Harlingen, 200 bls. Hull & Netherlands S. S. Co.
Stettin, 700 bgs.

Glucose—
Stettin, 100 bgs. Wilson, Sons, & Co., Ld.

Glue—
Dunkirk, 26 cks. Wilson, Sons & Co. Ld.
Rotterdam, 15 bgs Hull & Netherlands S. S. Co

Lithopone White—
Amsterdam, 20 cks. Hull & Netherlands S S Co.
Rotterdam, 12 ,,

Nickel Salts—
Rotterdam, 3 cks. Hull & Netherlands S. S. Co

Ochre—
Bremen, 1 cs. Veltmann & Co.
Marseilles, 73 cks.

Paint—
Marseilles, 24 cs. Wilson, Sons, & Co., Ld.
New York, 1 tub ,,

Phosphates—
Ghent, 150 t. Wilson, Sons, & Co., Ld.

Plumbago—
Leghorn, 349 bgs.

Potash—
Dunkirk, 48 dms. Wilson, Sons, & Co., Ld.

Pumice Stone—
Leghorn, 25 pks. Wilson, Sons, & Co., Ld.
Marseilles, 1 cs, ,,

Pyrites—
Huelva, 400 t.

Soap—
Marseilles, 4 cs. Wilson, Sons, & Co., Ld.
,, 1
Naples, 66 ,,

Soap Lye—
Marseilles, 6 dms.

Soda—
Antwerp, 4 cks. Bailey & Leetham, Ld.
Ghent, 100 bgs. Wilson, Sons, & Co., Ld.

Sodium Sulphide—
Amsterdam, 6 dms. Hull & Netherlands S. S. Co.

Starch—
Antwerp 20 cs. Bailey & Leetham, Ld.
Bremen, 405 Veltmann & Co.
Ghent, 182 Wilson, Sons, & Co., Ld.
Rotterdam, 80 Hull & Netherlands S. S. Co.

Tallow—
Dunkirk, 256 cks. Wilson, Sons, & Co., Ld.

Tar—
Danzig, 10 brls.
Konigsberg, 150 Wilson, Sons, & Co., Ld

Tartar—
Naples, 21 cks. Wilson, Sons, & Co., Ld.

Tartaric Acid—
Rotterdam, 2 cks. Hull & Netherlands S. S. Co.

Waste Salt—
Hamburg, 300 bgs. Bailey & Leetham, Ld.

White Lead—
Amsterdam, 13 cks. Hull & Netherlands S. S. Co.
Antwerp, 46 Bailey & Leetham, Ld.
Rotterdam, 64 cks. Hull & Netherlands S. S. Co.

Wood Pulp—
Christiania, 2,676 bls. 50 cs. Wilson, Sons, & Co., Ld.
Drontheim, 140 bls. ,,
Gothenburg, 97 ,,
Hango, 48 ,,
Stettin, 456 pks. ,,

Zinc Oxide—
New York, 60 brls.
Rotterdam, 20 cks. Hull & Netherlands S. S. Co.

Zinc Sulphate—
Rotterdam, 2 brls. Hull & Netherlands S. S. Co.

GLASGOW.

Week ending January 12th.

Acetic Acid—
Rotterdam, 30 crbs. J. Rankine & Son

Alum—
Rotterdam, 16 cks. J. Rankine & Son

Ammonia—
Antwerp 6 dms

Arachide Oil—
Rotterdam, 4 cks. J. Rankine & Son

Barium Chloride—
Rotterdam, 4 cks. J. Rankine & Son

Barium Sulphate—
Antwerp, 100 bgs.

Barytes—
Rotterdam, 107 pks. J. Rankine & Son

Bleaching Powder—
Rotterdam, 20 cks. J. Rankine & Son

Colours—
Rotterdam, 1 brl. 23 pks. 1 cs. J. Rankine & Son

Dyestuffs—
Alizarine
Rotterdam, 23 cks. 38 brls. J. Rankine & Son

Aniline
Rotterdam, 42 brls. 17 bxs. J. Rankine & Son
Amsterdam, 2 cks. ,,
Extracts
New York, 50 brls.

Glue—
Antwerp, 5 cks. 15 bls.
Rotterdam, 20 bgs. J. Rankine & Son

Glycerine—
Rotterdam, 10 dms. J. Rankine & Son

Ochre—
Rotterdam, 14 cks. J. Rankine & Son

Painters' Colours—
Antwerp, 7 cks. 5 cs.

Phosphate Rock—
Antwerp, 2,000 bgs.

Phosphorus—
New York, 5 cs.

Potassium Oxalate—
Rotterdam, 10 cks. J. Rankine & Son

Soda—
Rotterdam, 17 cks. J. Rankine & Son

Starch—
New York, 1,150 bgs.

Stearine—
Amsterdam, 143 bgs. J. Rankine & Son
Antwerp, 19

Talc—
New York, 78 bgs.

Ultramarine—
Rotterdam 8 cs. J. Rankine & Son

White Lead—
Rotterdam, 72 cks. J. Rankine & Son

Whiting—
Bordeaux, 270 brs.

Wood Pulp—
Christiania, 3 940 bls. 15 cs.

Zinc Oxide—
New York, 300 brls.

Zinc White—
Rotterdam, 20 cks.

TYNE.

Week ending January 7th.

Asbestos—
Hamburg, 40 bgs. Tyne S. S. Co.

Barytes—
Antwerp, 100 bgs. Tyne S. S. Co.
Hamburg, 300 ,,

Colours—
Hamburg, 3 cks. 1 cs. Tyne S. S. Co.

Dyestuffs *(otherwise undes.)*—
Rotterdam, 148 bgs. Tyne S. S. Co.

Limestone—
Antwerp, 7 crts. Tyne S. S. Co.

Paint—
Hamburg, 1 cs. Tyne S. S. Co.

Plumbago—
Hamburg, 3 cks. Tyne S. S. Co.

Potassium Carbonate—
Hamburg, 18 cks. Tyne S. S. Co.

Pyrites—
Huelva, 1,429 t. Tharsis Sulphur & Copper Co.

Saltpetre—
Hamburg, 20 cks. Tyne S. S. Co.

Soap—
Rotterdam, 2 cs. Tyne S. S. Co.

Starch—
Antwerp, 105 cs. Tyne S. S. Co.
Rotterdam, 48 ,,

Stearine—
Antwerp, 6 bgs. Tyne S. S. Co.

Ultramarine—
Hamburg, 10 cs. Tyne S. S. Co.

Varnish—
Amsterdam, 4 cks. Wm. Swanston & Sons

Waste Salt—
Hamburg, 240 t.

Wood Pulp—
Christiania, 710 bls.
Gothenburg, 162 pks.

Zinc Oxide—
Rotterdam, 20 cs. Tyne S. S. Co.

GOOLE.

Week ending January 4th.

Alizarine—
Rotterdam, 65 cks.

Aniline—
Rotterdam, 24 cks. 2 cs.

Barytes—
Antwerp, 270 bgs.

Caoutchouc—
Boulogne, 1 cs.

Chemicals *(otherwise undescribed)*
Hamburg, 2 cs.

Colours—
Hamburg, 23 cks. 20 cs.

Dyestuffs *(otherwise undes.)*—
Antwerp, 210 bgs.
Amsterdam, 5 cks.
Boulogne, 20 1 cs 12 pks.
Rotterdam, 57 7

Farina—
Delfszyhl, 330 bgs.
Hamburg, 500

Glycerine—
Hamburg, 4 dms.

Indigo—
Rotterdam, 5 cks.

Lime—
Antwerp, 167 bgs.

Logwood—
Belize, 470 t.

Potassium Sulphate—
Dunkirk, 31 cks. 58 dms.

Pyrites—
Huelva, 1,391 t.

Saltpetre—
Antwerp, 85 bgs.
Hamburg, 2 cks.

Silicate Soda—
Rotterdam. 1 ck.

Waste Salt—
Hamburg, 500 bgs.

GRIMSBY.

Week ending January 7th.

Barytes—
Hamburg, 20 cks.
Rotterdam, 200 bgs.

Caoutchouc—
Antwerp, 4 cs.
Hamburg, 2

Chemicals *(otherwise undescribed)*
Antwerp, 1 ck.

Colours—
Antwerp, 6 cks. 51 pks.
Hamburg, 10 1 cs. 178
Rotterdam, 2 36

Farina—
Hamburg, 50 bgs.

Salt—
Hamburg, 500 bgs.

Zinc Ashes—
Rotterdam, 5 cks.

EXPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending January 11th.

Acids—
Cape Town, 2 c. £22
Canton, 20 cs. 24
Durban, 20 40

Alkali—
Hobart, 1 t. 1 c. £20

Alum—
Mogador, 3 t. £17

Ammonia—
Tokio, 3 dms. £8
Durban, 4 c. 6 cs. 33
Cape Town, 6 8 41

Ammonium Carbonate—
Treport, 2 t. 9 c. £76
Hiogo, 2 47
Bombay, 8 10

Ammonium Sulphate—
Antwerp, 20 t. 3 c. £200
Dunkirk, 20 190
Bremen, 150 1,425
Hamburg, 71 14 699
Jersey, 3 32
Ostend, 175 1,794
Trinidad, 15 150

Antimony Salts—
Bombay, 6 c. £19

Arsenic—
Yokohama, 1 t. £18
Lyttelton, 1 18
Otago, 1 18

Bone Ash—
Fremantle, 11 t. £22
Perth, 4 cks. 10 c. 22
Borax—
Rotterdam, 10 t. £145
Launceston, 1 15
Perth, 2 9 c. 118
Fremantle, 10 12
Sydney, 40 kgs. 32
Santos, 15 12
Carbonic Acid Gas—
Cape Town, 20 cs. £10
Halifax, 26 130
Caustic Potash—
Wanganui, 2 t. £35
Caustic Soda—
Alexandretta, 2 t. 11 c. £96
Durban 6 8 95
Fremantle, 4 8
Otago, 1 19 22
Napier, 5 3 37
Chemicals *(otherwise undescribed)*
Cape Town, 5 kgs. £11
Hiogo, 15 15
Rotterdam, 15 85
New York, 2 t. 29
Launceston, 4 9 c. 12
E London, 5 108
Singapore, 2 cs. 28
Brisbane, 5 pks. (pt.) 26
Melbourne, 28 8c. 45
Perth, 18 41 pks. 3 65
Paris, 15 cks. 1 cs. 39
Calcutta, 4 20
Boston, 204 16 dms. 639
Dusseldorf, 16 26
Fremantle 1 37 pks. 62
Sydney, 5 74
Pt. Elizabeth, 6 54
Madras, 4 100
Shanghai, 4 71
Delagoa Bay, 33 73
Brussels, 28 kgs. 160
Antwerp, 30 171
Amsterdam, 6 16
King George's Sd. 1 2 15
Bombay, 3 36
Karachi, 5 19
Citric Acid—
Jamaica, 1 c. £8
Pt. Elizabeth, 1 7
Lisbon, 1 t. 5 cks. 144
Bombay, 5 cs. 31
Antwerp, 2 c. 12
Hamburg, 1 10 177
Copenhagen, 4 111
Hiogo. 12 71
Wellington, 2 11
Cape Town, 1 7
Rotterdam, 1 130
Rangoon, 3 cs. 19
Reval, 7 200
Calcutta, 1 6

Coal Products—
Aniline Oil
New York, 48 dms. £1,180
Anthracene
Dusseldorf, 42 cks. £116
Cologne, 48 110
Benzol
Boulogne, 85 cks. £201
Carbolic Acid
Hong Hong, 20 dms. £8
Cologne, 48 cks. 242
Fremantle, 2 2 cs. 16
Yokohama, 400 1,219
Creosote
Dieppe, 23,500 galls. £123
Newport News, 500 cks. 354
Dyes
Boston, 9 cks. £87
Naphtha
E. London, 2 crts. £7
Melbourne, 70 dms. 39
Toronto, 6 70
Wellington, 49 17
Naphthaline
Calcutta, 10 cks. £9
Hamburg, 11 98
Paris, 51 bgs. 35
Pitch
Stettin, 812 t. £829
Boston, 400 cks. 212
Avilles, 1,800 t. 2,138
Antwerp, 205 250
Leghorn, 1,230 1,550
Durban, 42 cks. 21
Pt. Elizabeth, 5 4
Alexandria, 100 brls. 24
Cette 1,477 t. 1,699
Pyridine Bases
Cologne, 10 dms. £316
Tar
Cologne, 196 cks. £130
Melbourne, 25 dms. 5
Nagasaki, 10 rnlts. 6 brls. 35
Durban, 200 dms. 37
Coal Products *(otherwise undes.)*—
Paris, 2 cks. £14
Fremantle, 2 cs 8
Malmo, 120 brls. 85
Copper Sulphate—
Paris, 88 t. 10 c. £3,412
Marseilles, 37 8 704
Bordeaux, 54 3 1,029
Treport, 10 8 185
Odessa, 10 4 191
Cream of Tartar—
Launceston, 5 kgs. £22
Fremantle, 1 t. 1 c. 82
Disinfectants—
Durban, 2 cs. £11
Launceston, 4 11
Calcutta, 105 dms. 27
Perth, 9 26
Sydney, 9 cks. 29
Cape Town, 40 32 50 133
Barbadoes, 4 28
Wellington, 12 c. 13
Pt. Elizabeth, 7 12
Madras, 221 pks. 5 cs. 50 65
Penang, 10 cks. 250 205
Manure—
Rouen, 35 t. £113
Jersey, 64 11 c. 258
Durban, 85 590
Fremantle, 9 5 49
Cape Town, 220 1,510
Cherbourg, 279 16 750
Demerara, 100 900
Hong Kong, 1 10
St. Lucia, 100 853
Nitric Acid—
Bombay, 30 cs. £39
Phosphates—
Fremantle, 50 t. £119
Phosphorus—
Hobart, 5 c. £40
Potash—
Boston, 3 c. £15
Potassium Chlorate—
Bombay, 4 cs. £17
Potassium Cyanide—
Delagoa Bay, 20 t. 195 cs. £3,914
Fremantle, 4 50 580
Melbourne, 2 16
Perth. 1 18 c. 237
Potassium Permanganate—
Madras, 7 c. £162
Salt Cake—
Brussels, 145 t. £945
Saltpetre—
Oporto, 15 t. 2 c. £239
Perth, 3 56
E. London, 11 11
Sheep Dip—
M Video, 17 t. 16 c. £450
Pt. Elizabeth, 3 60 dms. 28
B. Ayres, 28 2 840
Wellington, 3 18 65
Soda—
Durban, 8 t. 2 c. £28
Alexandria. 1 13 8
Soda Crystals—
Durban, 5 t. £18
Sodium Bicarbonate—
Pt. Elizabeth, 1 t. £8
Cape Town, 2 12
Bahia, 7 c. 6
E. London, 1 17
Melbourne. 2 28
Sodium Carbonate—
E. London, 1 t. £27
Sodium Silicate—
Pt. Chalmers, 1 t. 13 c. £8
Sulphur—
Trinidad, 15 c. £6
M. Video, 2 5
Sulphuric Acid—
Madras, 1 t. 11 c. £15
Superphosphates—
Beypore, 20 t. £88
Tartaric Acid—
Hiogo, 1 t. 15 c. £190
Wellington, 2 11

LIVERPOOL.

Week ending January 11th.

Acetic Acid—
Lisbon, 2 cks. £10
Alum—
Calcutta, 4 t. £20
Cape Town, 1 5
Madras, 8 40
Adelaide, 15 c. 4
Piræus, 2 14 13
Patras, 1 5 6
Volo, 1 1 1 q. 5
Melbourne, 2 10
Alexandria, 7 10 38
Malaga, 3 2 2 17
Lisbon, 8 12 53
Aluminous Cake—
Smyrna. 4 t. 2 c. £20
Ammonium Carbonate—
Toronto, 15 c. 1 q. £19
Nantes, 2 t. 3 29
Barcelona, 1 3 27
Lisbon, 4 2 5
Corunna, 10 3 15
New York, 2 10 62
Sydney, 5 cs. 19 32
Genoa, 8 3 7
Libau, 1 27
Ammonium Chloride—
St. John, N.B., 5 t. 2 c. £86
Toronto, 3 2 q. 6
Trieste, 2 64
Odessa, 3 3 97
Barcelona, 6 19 128
Syra, 2 4
Melbourne, 1 17
Bourgas, 12 19
Copenhagen, 1 24
C. Coast Castle, 4 6
Axim, 3 2 5
Ammonium Sulphate—
Las Palmas, 72 t. 17 c. £751
Genoa, 134 11 2 q. 1,361
Venice, 35 14 2 —
Castellon, 86 9 884
Valencia, 75 15 776
Malaga, 102 4 1,025
Civita Vechia, 10 4 105
Messina, 5 4 55
Philadelphia, 151 11 1,550
St. Louis, 50 11 512
Huelva, 7 10 78
St. John's, 9 17 3 102
Lisbon, 40 10 415
Basic Slag—
Palermo, 20 t. £31
Bleaching Powder—
Antwerp 30 cks.
Baltimore, 61 20 c/. 50 bxs.
Barcelona, 50
Bari, 10
Bombay, 8
Boston, 1,191
Calcutta, 170
Cambria, 18
Cornwall, 15
Genoa, 90
Ghent, 62
Leghorn, 9
Lisbon, 31
Milwaukee, 106
Moss, 29
Muncie, 171
New York, 50 dms.
Oporto, 25
Philadelphia, 26
Rio de Janeiro, 27 brls.
Rotterdam, 31
San Sebastian, 43
Seville, 23
Sydney, 88
Toronto, 30
Valencia, 4
Vera Cruz, 30
Bone Ash—
Brisbane, 11 1 c. £13
Boracic Acid—
Antwerp, 1 t. £16
Adelaide, 1 2 c. 27
New York, 1 30
Borax—
Christiania, 1 t. £15
Sydney, 5 11 c. 2 q. 78
Antwerp, 1 17
Santiago, 9 6
Vera Cruz, 4 17 106
Gothenburg, 6 4
St John, N.B., 12 15 227
Hamburg, 1 16
Ghent, 2 19 47
New York, 13 1 9
Melbourne, 1 14
Rotterdam, 5 76
Toronto, 10 125
Copenhagen, 10 125
Wellington, N.Z., 1 2 14
Calcium Chloride—
Boston, 30 t. £56
Sydney, 31 7 c. 69
Melbourne, 5 2 11
Calcutta, 10 4 23
Carbolic Acid—
Shanghai, 3 cs. £11
Yokohama, 6 t. 3 c. 296
Rouen, 10 632
Boston, 8 18 3 q. 247
Caustic Potash—
Sydney, 4 t. 14 c. £130
Brisbane, 1 16 43
Baltimore, 4 9 118
Caustic Soda—
Adelaide, 75 dms.
Alexandria, 35
Amsterdam, 92
Ancona, 25
Antwerp, 14 cks.
Baltimore, 5 brls. 50 bgs.
Barcelona, 241
Bari, 131
Batavia, 15
Cape Town, 10 cs.
Cienfuegos, 26
Christiania, 10
Cincinatti, 50
Delagoa Bay, 40
Dunkirk, 35
E. London, 20
Fiume, 77
Genoa, 419
Hamburg, 4
Havana, 30
Hiogo, 150
Hong Kong, 35
Karalla, 4
Leghorn, 81
Libau, 50
Lisbon, 50
Madrid, 50 brls.
Malaga, 80
Maracaibo, 10
Marseilles, 30
Mauritius, 12
Melbourne, 26 14 c
Messina, 20
M. Video. 75
New York, 125
Penang, 100
Penedo. 30
Pernambuco, 121
Philadelphia, 50
Piræus. 30
Portland, M., 35
Rangoon, 15
Rio de Janeiro, 107
Rotterdam, 31 115 cks.
St. John's. 10
St. Stephen's, 50
Salaverry, 35
San Paulo, 42
San Sebastian, 60
Seville, 467 25 brls. 100 kgs.
Sydney, 13 5 cs.
Tarragona, 12 26 cks.
Tornoto, 50
Trieste, 173
Valencia, 55
Venice, 33
Vera Cruz, 100
Wellington, 28 10
Yokohama, 100
Chemicals *(otherwise undescribed)*
Habana, 1 t. 3 c. £112
Stettin, 10 1 130
Smyrna, 2 cks. 16
Genoa, 9 t. 19 2 q. 133
Gothenburg, 1 10
Alexandria, 10 brls. 33
Rotterdam, 1 30
Marseilles, 1 5 c. 37
Calcutta, 6 & qty. 333
Catacola, 2 cks. 8
Volo, 1 8
Samsoun, 2 8
New York, 15 t. 11 c. 474
Barcelona, 1 29
Revel, 4 439
China Clay—
Baltimore, 781 cks.
Lisbon. 60 135 bgs
Newport News, 92
Pernambuco, 40
Portland, M., 400
Citric Acid—
Brisbane, 1 c. £7
Coal Products—
Aniline Oil
Genoa, 2 dms.
Philadelphia, 10
Aniline Salts
Amsterdam, 2 pns.
Bombay, 9 cks.
Halifax, N.S., 2
Philadelphia, 20 cs.

Creosote Oil
Bordeaux, 200 cks. 250 brls.
B Ayres, 269
Dyes
Lagos, 1 cs.
Pitch
Durban, 7 cks. 16 dms.
Genoa, 112 t.
Antwerp, 59 12 c.
Tar
Calcutta, 50 dms.
Guayaquil, 50
Lagos, 20 brls.
Maceio, 5

Copperas—
Smyrna, 6 t. 4 c. 2 q. £9

Copper Sulphate—
Genoa, 55 t. 6 c. £924
Algiers, 24 18 462
Messina, 50 831
Catania, 73 1 1,070
Libau, 1 16
Talcahuano, 1 13 30
Batoum, 10 157
Adelaide, 5 2 85
Naples, 32 1 1 q. 543
Rio de Janeiro, 5 1 5
Bordeaux, 218 7 2 3,994
Venice, 20 314
Ancona, 53 14 832
Marseilles, 4 16 75
Nantes, 74 5 1,113
Hamburg, 14 3 14
Trieste, 82 19 1,553
Sydney, 5 94
Bombay, 5 86
Piræus, 5 2 85
Leghorn, 7 2 130
Rouen, 44 6 804

Cream of Tartar—
Brisbane, 1 c. 1 q. £6

Disinfectants—
Pt. Natal, 5 t. 15 c. £25

Dried Blood—
Las Palmas, 5 t. £36
Rouen, 7 6 c. 55

Dyestuffs—
Aniline Colours
Philadelphia, 26 cks. 1 brl.
Extracts
Barcelona, 20 cks. 20 brls.
Boston, 25
Lisbon, 3
Logwood
Alexandria, 220 bgs.

Dyestuffs (*otherwise undescribed*)
Boston, 15 cks.

Glycerine—
Galata, 9 c. £8
Calcutta, 1 3
Cadiz, 5 12
Valparaiso, 2 2 q. 7

Guano—
Malaga 193 t. 19 c. £1,406

Iron Oxide—
Baltimore, 2 t. 2 c. £35

Magnesia—
B. Ayres, 20 cs.
Havana, 6

Magnesium Chloride—
Singapore, 1 t. 19 c. £8

Magnesium Sulphate—
Lisbon, 7 t.

Manure—
Gd. Canary, 143 t. £1,056
B. Ayres, 18 c. 3 q. 20
Seville, 19 12 126

Oxalic Acid—
Philadelphia, 3 t. 13 c. £95
Boston, 15 540

Paint—
Alexandria, 198 kgs.
Antwerp, 38 1 brl. 2 cks.
Bahia, 4 cs.
Belize, 183
Beyrout, 50
Calcutta, 1
Cardenas, 7
Cartagena, Sp., 46 dms.
Constantinople, 185
Gibraltar, 120 pks.
Guayaquil, 3 cks.
Havana, { 50 12 22 / 40 dms.
Iquique, 20 cks.
Las Palmas, 90
M. Video, 30 dms.
Nagasaki, 50
N. Orleans, 17
New York, { 12 cks. / 19 pks. / 50 dms.
Old Calabar, 12
Para, 45 13 brls.
Pernambuco, 85 2 cs. 30 cks.
Philadelphia, 34
Ponce, 100 2
Rio de Janeiro, 11
Roodepost, { 8 60 dms. / 7 brls.
Rotterdam, 15 3 pks.
Salaora, 3 5 cks.
San Juan, 120
Sierra Leone, 79 pks.
Singapore, 40 dms.
Valparaiso, 200 27 cks.

Painters' Colours—
Lagos, 32 pks.

Paraffin Wax—
Bahia, 27 cs.
Bari, 20 bgs.
Constantinople, 30
Lisbon, 500
Odessa, 10
Rio de Janeiro, 6 c.
Smyrna, 35
Syra, 8

Potash Salts—
Guaymas, 18 t. 19 c. 3 q. £1,610

Potassium Bichromate—
Barcelona, 3 t. 19 c. £129
Santos, 4 7
Seville, 13 22

Potassium Carbonate—
Rio de Janeiro, 5 c. 3 q. £7

Potassium Chlorate—
Amsterdam, 10 c. £15
Ancona, 10 15
Boston, 25 t. 1 107
Copenhagen, 1 10 45
Gothenburg, 7 10 234
Hamburg, 5 154
Libau, 10 300
Lisbon, 7 10 225
Melbourne, 2 60
New York, 5 150
Philadelphia, 2 10 75
Reval, 25 10 690
Rotterdam, 1 28
Santos, 3 90

Potassium Silicate—
Amsterdam, 26 t. £10

Salt—
Abonnema, 40 t. 3 c.
Antwerp, 75
Baltimore, 180
Bonny, 20
Boston, 250
Brussels, 3 11
Buenaventura, 100 9
B. Ayres, 50
Burutu, 400 2
Calcutta, 2,250
C. C. Castle, 18 15
Cape Town, 50
Christiania, 20
Christiansand, 61
Copenhagen, 100
Conakry, 49
Drewin, 6 14
E. London, 5
Egwanga, 30 10
Galveston, 600
Ghent, 200
Gd. Bassa, 10
Guayaquil, 1 brl.
Hamburg, 103 8 c.
Lagos, 240
Lahore, 11 3
Melbourne, 78 10
Molimbo, 20 11
Mossel Bay, 25
Newfairwater, 250
N. Orleans, 400
Rotterdam, 35
Nuevitas, 50
Old Calabar, 280 6
Opobo, 40 3
Para, 262 10
Quillo, 100
Rangoon, 3,517
Rotterdam, 155
Salt Pond, 12 7
Sierra Leone, 200
Whydah, 25

Salt Cake—
Antwerp, 346 t. 3 c. £446
Genoa, 22 19 34
Philadelphia, 50 19 82
Sydney, 5 1 12

Saltpetre—
Maceio, 2 t. 10 c. £54
Pernambuco, 2 17 58
Teneriffe, 4 5

Sheep Dip—
B. Ayres, 40 t. 1 c. £924

Soap—
Accra, 650 bxs.
Amiens, 50 cs.
Antwerp, 100
Axim, 370
Bangkok, 1,000
Batavia, 850
Beira, 50
Bombay, 1,485 5
Brussels, 3,626
Burutu, 55
Calcutta, 86 500 bdls.
Calicut, 6
C. C. Castle, 100
Cape Town, 1,000 3
Christiania, 100
Colombo, 5
Degama, 200
Delagoa Bay, 500
Galata, 25
Gibraltar, 304
Gd. Bassa, 85 2
Iquitos, 400
Johannesburg, 95
Karachi, 291
Kingston, 2,003 5
Lagos, 784
Larnaca, 297
Livorno, 6
Madras, 20
Malta, 124
Manaos, 990
Meiktala, 4
Melilla, 101
Menado, 100
Mossel Bay, 500
Newcastle, 5 cks.
Para, 651 120 bdls.
Penang, 220
Pt. Elizabeth, 20
Pretoria, 503
Rangoon, 250
Reunion, 500
Sierra Leone, 260
Shanghai, 1
Singapore, 150
Surinam, 100
Tangiers, 65

Soap Lyes—
Rotterdam, 50 dms.

Soda Ash—
Adelaide, 118 cks.
Ancona 112 bgs.
Antwerp, 2,101
Barranquilla, 50 cs.
Barcelona, 268
Beyrout, 100
Boston, 100 32 tcs. 36 / 170
B. Ayres, { 120 brls.
Calcutta, 58
Cavalla, 12
Copenhagen, 1,300
Genoa, 1,420
Hango, 81
Hiogo, 318
Leghorn, 508 67
Lisbon, 15
Melbourne Wf., 351
M. Video, 15
Montreal, 50
Naples, 256 76
Newport News, 36
New York, 64 tcs. 132 / 50 brls. / 400
Rio de Janeiro, { 1,000
Rotterdam, 80
St. John's, 80
Smyrna, 50
Syra, 100
Talcahuano, 2
Trieste, 90 324
Vizagapatan, 300
Venice,

Soda Crystals—
Alexandria, 100 brls.
Amsterdam, 35
Havana, 8
Malta, 300
M. Video, 100 bgs.
Palermo, 102
Philadelphia, 140 cks.

Sodium Acetate—
Melbourne, 17 cks.

Sodium Bicarbonate—
Adelaide, 240 kgs.
Ancona, 40
Batavia, 10
Bombay, 275
B. Ayres, 30 cks.
Calcutta, 2,935
Constantinople, 80 bgs.
Corunna, 2 t. 5 c.
Dunkirk, 192 kgs.
Genoa, { 50 bgs. / 50 kgs.
Hiogo, 1,100
Madras, 100
Malaga, 15 dms.
Malta, 7 brls.
Marseilles, 75 cs.
Melbourne, 20
Melbourne Wf., 100
Melbourne Bay, 227
Messina, 20
Naples, 30
New Glasgow, 25
Odessa, 300
San Juan, 20
Seville, 110 4 cks.
Sydney, 790
Talcahuano, 30

Sodium Bichromate—
Seville, 2 cks.

Sodium Carbonate—
Wellington, 6 brls.

Sodium Chlorate—
Boston, 50 kgs.
New York, 100
Reval, 400

Sodium Hyposulphite—
Calcutta, 100 kgs.
Callao, 100

Sodium Sulphate—
Portland, Me., 31 cks.
Vera Cruz, 40 kgs. 30

Sodium Sulphite—
Hamburg, 17 brls.

Sulphur—
Boston, 25 t. 1 c. £107
Cartagena, N.G., 1 4 2 q. 9
Ghent, 6 26
Newfairwater, 30 129
San Juan, P.R., 1 6

Sulphuric Acid—
Maceio, 10 cs. £8
Rio de Janeiro, 2 t. 2 c. 5

Superphosphates—
Adelaide, 74 t. £199
Castellon, 50 2 c. 140
Cullera, 250 578
Las Palmas, 5 12
Lisbon, 200 500
Malaga, 150 368
Oporto, 20 47
Valencia, 510 1,296

Tartaric Acid—
Brisbane, 1 c. 1 q. £7
Wellington, N.Z., 1 5

Tin Crystals—
Portland, Me., 10 c. £23

Varnish—
Barcelona, 6 brls.
Boston, 695 bgs. 1,408 cks.
Genoa, 1 cs. 6

White Lead—
E. London, 172 kgs.

Zinc Chloride—
Portland, Me., 1 t. 4 c. 3 q. £7

MANCHESTER.

Week ending January 11th.

Alum—
Tunis, 4 brls.

Ammonium Chloride—
Tunis, 4 brls.

Aniline Colours—
Germany, { 4 cks. 3 cs. / 24 kgs.

Carbolic Acid—
Germany, 100 cks.

Caustic Soda—
Beyrout, 25 dms.
Italy, 100
Jaffa, 60

Chemicals (*otherwise undescribed*)
Alexandria, 100 cks.
Gabes, 10
Magog, 3
Sherbrooke, 107
Hamburg, 2 cs.

Coal Products—
Aniline Oil
Germany, 5 dms.
Aniline Salts
Germany, 2 cks.
Pitch
Belgium, 1,044 t. 4 c.
Tar Salts
St. Petersburg, 56 bgs.

Colours—
Belgium, 5 kgs.

Copperas—
Alexandria, 101 cks.

Fustic—
Christiania, 25 bgs.
Gamma Acid—
Germany, 10 cks.
Glue—
Germany, 10 cks.
Holland, 35
Glycerine—
Germany, 5 crbys.
Linseed Oil—
Alexandria, 20 brls.
Beyrout, 3
Jaffa, 1
Larnaca, 1
Logwood—
Christiania, 25 bgs.
Nitrous Oxide—
Copenhagen, 1 bx.
Ochre—
Larnaca, 2 brls.
Paint—
Jaffa, 1 ck.
Larnaca, 1
Paraffin Wax—
Beyrout, 6 cs.
Potash—
Alexandretta, 40 kgs.
Potassium Chlorate—
Montreal, 17 cks.
Soap—
Germany, 2 pns.
Malta, 4 bxs.
Soda Ash—
Beyrout, 55 brls.
Jaffa, 100
Sodium Naphthionate—
Gabes, 29 cks.
Germany, 16
Tallow—
Holland, 1 ck.
Turpentine—
Jaffa, 2 brls.

HULL.

Week ending January 7th.

Alkali—
Riga, 18 cks.
Ammonium Sulphate—
Genoa, 888 bgs.
Stettin, 635
Bleaching Powder—
Hango, 5 cks.
Caustic Soda—
Riga, 15 dms.
Chemicals *(otherwise undescribed)*
Amsterdam, 96 cks.
Christiania, 4,051 slbs.
Constantinople, 20
Genoa, 37 cs.
Gothenburg, 1
Hamburg, 136 20 pks.
Konigsberg, 16
Leghorn, 10
Marseilles, { 100 bgs. / 30 cks.
New York, 78
Odessa, 249 33
Reval, 30
Riga, 21
Rotterdam, 55 20
Stettin, { 134 bgs. / 10 cks. 5
Cottonseed Oil—
Amsterdam, 1,641 c.
Antwerp, 606
Copenhagen, 105
Dunkirk, 608
Ghent, 206
Gothenburg, 200
Hamburg, 446
Odessa, 41
Rotterdam, 1,203
Rouen, 200
Stettin, 53
Creosote—
Konigsberg, 10 cks.
Stettin, 5
Dyestuffs *(otherwise undescribed)*
Danzig, 4 cks.
Stettin, 60 bgs.
Glue—
New York, 32 cks.
Linseed Oil—
Antwerp, 8 c.
Christiania, 43
Copenhagen, 18
Gothenburg, 53
Hamburg, 51
Rotterdam, 143
Manure—
Genoa, 218 t.
Ghent, 100
Ochre—
Hamburg, 3 cks.
Paint—
Genoa, 96 cks.
Painters' Colours—
Amsterdam, 7 cks. 3 dms.
Antwerp, { 55 / 87 cs. 120 pks. 23 dms.
Christiania, 39
Ghent, 5
Gothenburg, 1
Hamburg, 7
Leghorn, 59
New York, 43 23
Naples, 4
Odessa, 34
Rouen, 5
Rotterdam, 106 1 5
Pitch—
Antwerp, 436 t.
Soap—
Amsterdam, 47 cs.
Christiania, 1
Tar—
Stettin, 10 cks.
Varnish—
Christiania, 1 ck.
Hamburg, 6
Riga, 1 cs.
Stettin, 12

GLASGOW.

Week ending January 12th.

Alum—
Rio de Janeiro, £27
Ammonia—
Havre, 13 t. 5 c.
Rotterdam, £16
Ammonium Chloride—
Italy, 6 t. 4¼ c.
Ammonium Sulphate—
Castellon, 308 t. 11½ c.
Demerara, 238 13
Genoa, 100 7
Italy, 50 17¼
Malaga, 50 10½
Philadelphia, 25
Valencia, 234 12
Borax—
Delagoa Bay, £49 13s.
New York, 50 13
Carbolic Acid—
Rotterdam, £100
Chemicals *(otherwise undescribed)*
Rotterdam, £5
Coal Products—
Benzine
St. Nazaire, £78 14s.
Benzol
Rotterdam, £84
Creosote Oil
B. Ayres, £38
Creosote Salts
France, £27
Naphthaline
Antwerp, £35
Pitch
Dunkirk, 500 t.
Hamburg, 10 13 c.
Havre, 400
Sicily, £25
St. Nazaire, 1,262
Tar
Bombay, £20
Dyestuffs *(otherwise undescribed)*
Calcutta, £25
Rio de Janeiro, 425
Extracts—
U.S.A., £337 16s.
Farina—
Rio de Janeiro, £68
Gelatine—
U.S.A., £522
Glycerine—
Algoa Bay, £30
Iodine—
Rotterdam, £700
Linseed Oil—
B. Ayres, 1 t. 11 ½ c.
Malta, 3 19½
Pietermaritzburg, 1 4 18 lbs.
St. John's, N.B., 7 6
Trinidad, 4 3½
Logwood—
Canada, £90 14s.
Pt. Lyttelton, 33 10
Manganese—
Fiume, £98
Manganese (Recovered)—
Rotterdam, £25
Manure—
Malaga, 20 t. 1¾ c.
Paint—
Bahia, £42
Natal, 23
Painters' Colours—
Algoa Bay, £72 12s.
Bombay, £61
B. Ayres, 35
Calcutta, 600
Demerara, 27
Durban, 194
Delagoa Bay, £36 11s.
Malta, 89 18
New York, £32
Pt. Elizabeth, 28
Pietermaritzburg, £37 13s. 6d.
Rio de Janeiro, 21
Trinidad, 22 5
Paraffin Wax—
Barcelona, £215
Christiania, 20
Fiume, 743
Genoa, 20
Italy, 417
Leghorn, 78
Marseilles, 120
Naples, 80
Rio de Janeiro, 110
Rotterdam, 15
Singapore, 23
Trieste, 805
Potassium Bichromate—
Genoa, £539
Rotterdam, 234
Potassium Cyanide—
Johannesburg, £330
Potassium Prussiate—
Italy, £150
Rio de Janeiro, 99
Sheep Dip—
B. Ayres, £419
Soap—
St. John's, N'fd., 10 c. 3 q.
Trinidad, 6 t. 16 27 lbs.
U.S.A., 1 8 £465 10s.
Sodium Bichromate—
Genoa, 10 t. 4¾ c.
Quebec, 6 5½
Stannous Chloride—
Trinidad, £200 11s.
Starch—
Rio de Janeiro, £378
Sulphur—
Demerara, £52 10s.
Trinidad, £40
Sulphuric Acid—
Rio de Janeiro, £20
Tallow—
Italy, 9 t. 2 c.

TYNE.

Week ending January 7th.

Alkali—
Riga, 25 t. 8 c.
Alum Waste—
Copenhagen, 57 t. 2 c.
Horsens, 10 3
Ammonium Sulphate—
Hamburg, 50 t. 13 c.
Antimony—
Barcelona, 2 t.
Hamburg, 1
Arsenic—
Barcelona, 5 c.
Barium Binoxide—
Garrucha, 1 t. 2 c.
Hamburg, 5 7
Rotterdam, 8 15
Barytes—
Antwerp, 2 t.
Bleaching Powder—
Antwerp, 105 t. 3 c.
Christiania, 14 19
Gothenburg, 10
Rotterdam, 8 8
Stockholm, 2
Borax—
Aarhuus, 1 t. 6 c.
Caustic Soda—
Christiania, 2 t. 18 c.
Copenhagen, 1 14
Genoa, 42 12
Gothenburg, 4 18
Stockholm, 3 3
Chemicals *(otherwise undescribed)*
Sebastopol, 10 c.
Iron Oxide—
Sebastopol, 2 t.
Litharge—
Genoa, 2 t. 1 c.
Gothenburg, 1 5
Hamburg, 15
Stockholm, 4 2
Magnesia—
Antwerp, 1 t. 9 c.
Barcelona, 6 3
Hamburg, 1 14
Lisbon, 5
Manganese—
Antwerp, 38 bgs.
Manganese Sulphate—
Sebastopol, 5 c.
Naphthaline—
Riga, 57 t. 12 c.
Paint—
Rotterdam, 5 c.
Salt—
Christiania, 2 c.
Soda Ash—
Antwerp, 3 t. 7 c.
Bergen, 10
Soda—
Christiania, 2 t. 18 c.
Constantinople, 1 5
Rotterdam, 10
Sodium Hyposulphate—
Christiania, 19 c.
Sodium Sulphate—
Antwerp, 110 t.
Gothenburg, 75
Sulphur—
Christiania, 100 t.
Gothenburg, 20
White Lead—
Palermo, 1 t. 3 c.
Zinc Ashes—
Rotterdam, 9 t. 2 c.

GOOLE.

Week ending January 4th.

Chemicals *(otherwise undescribed)*
Amsterdam, 10 cks.
Boulogne, 3
Coal Products *(otherwise undes.)—*
Amsterdam, 117 cks.
Boulogne, 31 1 cs.
Dyestuffs *(otherwise undescribed)*
Rotterdam, 1 ck.
Logwood—
Ghent, 86 bgs.
Hamburg, 20 t.
Manure—
Bruges, 30 bgs.
Hamburg, 600
Painters' Colours—
Boulogne, 2 tins
Ghent, 2 cks.
Hamburg, 1 cs.
Pitch—
Antwerp, 682 t.

GRIMSBY.

Week ending January 7th.

Alkali—
Hamburg, 550 dms.
Ammonium Sulphate—
Antwerp, 340 bgs.
Caoutchouc—
Malmo, 4 cs.
Chemicals *(otherwise undescribed)*
Hamburg, 2 cs.
Coal Products *(otherwise undes.)—*
Dieppe, { 4 kgs. / 58 cks. 1 cs.
Colours—
Esbjerg, 13 dms.
Painters' Colours—
Antwerp, { 4 kgs. / 6 cks. 1 cs. 3 pks.
Hamburg, 1 7
Rotterdam, 22

PRICES CURRENT.

WEDNESDAY, Jan. 18, 1899.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9	&	8/3
,, Glacial .. .. ,,		35/-	
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	9
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	0	11½
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	0
Arsenic, white powdered .. .. nett per ton	16	10	0
Alum, loose lump .. .. ,,	4	5	0
Alumina Sulphate (pure) .. .. ,,	3	15	0
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¼ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880 = 28° B .. .. ,,	0	0	2¾
,, = 24° B .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	19	0	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	10	10	0
,, ,, (grey) Hull .. .. ,,	10	8	9
Aniline Oil (pure) .. .. per lb.	0	0	4¼
Aniline Salt ,, ... ,,	0	0	4¼
Antimony .. .. per ton	36	15	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	4	10	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	5	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. ,,	15/-	to	2:/-
Coal Tar Products and Dyes:—			
Alizatine (artificial) 20 % .. .. nett per lb.	0	0	6¼
Magenta .. .. ,,	0	3	9
Anthracene, 30% A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	8½
,, 50/90 ,, ... ,,	0	0	8½
Carbolic Acid (crude 60°) .. .. ,,	0	1	11
,, (crystallised 40°) .. .. .. per lb.	0	0	6¾
,, (liquid 95/97%) .. .. .. per gallon	0	1	0
Creosote (ordinary) .. .. ,,	0	0	3
,, (filtered for Lucigen light) .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	2	0
Solvent Naphtha, 90% at 160° .. .. per gallon	0	1	2
Copper .. .. per ton	64	7	6
,, Sulphate .. .. ,,	20	0	0
,, Oxide (copper scales) .. .. ,,	47	10	0
Glycerine (crude) 80% .. .. ,,	24	0	0
,, (distilled S.G. 1250°) .. .. ,,	48	10	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	2	6
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	14	15	0
,, Litharge Flake (ex ship) .. .. ,,	16	5	0
,, Acetate (white ,,) .. .. ,,	25	0	0
,, ,, (brown ,,) .. .. ,,	17	15	0
,, Carbonate (white lead) pure .. .. ,,	17	10	0
,, Nitrate .. .. ,,	20	0	0
Lime, Acetate (brown) (ex ship) .. .. per ton	5	7	6
,, ,, (grey) (ex ship) .. .. ,,	7	17	6
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton	9	10	0
,, Sulphate (Epsom Salts) .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	16	0	0
,, Borate .. .. per cwt.	2	2	6
,, Ore, 70% .. .. per ton	3	10	0
Methylated Spirit, 61° O.P .. .. per gallon	0	2	0
Naphtha (Wood), Solvent .. .. ,,	0	2	10
,, ,, Miscible, 60° O.P. .. .. ,,	0	3	9
Oils:—			
Cotton-seed .. .. per ton	15	10	0
Linseed .. .. ,,	18	10	0
Stearine .. .. ,,	26	0	0
Phosphorus (Yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	0	0
,, Chlorate .. .. per lb.	0	0	3½
,, Cyanide, 98 % .. .. ,,	0	1	0
,, Hydrate (Caustic Potash) 90 % .. .. per ton	22	0	0
,, ,, ,, 75/80 % .. .. ,,	17	15	0
,, Potash Hydrate Liquid 50 % .. .. .. ,,	10	5	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	2	12	6
,, Prussiate Yellow .. .. per lb.	0	0	7
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	0
,, Muriate, 80 % ,, ... ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3 5/16
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % .. nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	5	0
,, ,, (Carb. Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Soda Crystals) .. .. .. ,, ,, (f.o.r. w'ks.)	2	10	0
,, Acetate (ex-ship) .. .. ,,	12	10	0
,, Arseniate, 45 % .. .. ,,	13	0	0
,, Chlorate .. .. per lb.	0	0	3¾
,, Borate (Borax) .. .. nett per ton	16	0	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton (10 ton lots)	7	12	6
,, ,, (74 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,, (10 ton lots)	6	17	6
,, ,, (60 % Caustic Soda) .. ,, ,, (10 ton lots)	5	17	6
,, ,, (pure liquor 90° Tw.) .. ,, ,, (10 ton lots)	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25 % .. .. ,,	16	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	6
,, Nitrite, 98 % .. .. per ton	25	0	0
,, Phosphate .. .. ,,	10	7	6
,, Prussiate .. .. per lb.	0	0	5 3/8
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	7	6
,, Stannate, 40 % .. .. per cwt.	2	15	0
,, Sulphate (Salt-cake) .. .. per ton	1	8	6
,, ,, (Glauber's Salts .. .. ,,	1	10	0
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	4	15	0
Strontium Hydrate, 100 % .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. .. per lb.	0	0	5¾
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton	7	0	0
,, (Roll Brimstone) .. .. ,,	6	0	0
,, Brimstone: Best quality .. .. ,,	4	12	6
Superphosphate of Lime (26 %) .. .. ,,	2	10	0
Tallow .. .. ,,	23	10	0
Tin Crystals .. .. per lb.	0	0	6¼
,, English Ingots .. .. per ton	104	10	0
Zinc (Spelter) .. .. ,,	24	12	6
,, Chloride (solution, 100° Tw.) .. .. .. ,,	7	5	0
,, Sulphate, Crystal .. .. ,,	6	15	0

THE

CHEMICAL TRADE JOURNAL

AND

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Advertisements intended for insertion in the current week's issue should reach the office by **Thursday morning** at the latest.

LOOKING back over the events of the last year, and taking into consideration the depression which has pervaded the commercial side of the chemical world, it appears to us that the chief developements have been in connection with electro-chemistry and the organisation of our educational systems.

Without fear of being deemed over-sanguine, we think we may safely say that the introspection and criticism which have been so lavishly vouchsafed during the past three or four years is beginning to bear fruit; and if the fructification is not so apparent as some anticipated, we think there is nevertheless ample cause for congratulation, in the fact that there is any improvement to be seen in so short a time. Important fundamental changes are not made in a moment, and in remodelling the plan of our commercial campaign it is gratifying to learn that wherever the necessary reforms have been completed the change has operated for good.

Perhaps the third most noticeable feature of 1898 was the extended use of water-power. At Foyers we have seen the completion and successful working of an extensive undertaking, and the water-power resources of Ireland will, we believe, be requisitioned this year. Niagara already runs well in harness, and supplies the motive power for three electro-chemical works, producing alkali and bleach, metallic sodium, and aluminium, as well as works for the manufacture of carborundum and calcium carbide; while for very similar purposes the water-power of Spain, Scandinavia, and Switzerland is also being utilised.

In regard to educational matters, the

ADVANCES IN SCIENCE

are the best evidence of how the fostering of research is already strengthening our hands.

The Science Research Scholarship Committee has issued a most encouraging report upon the results of the last nine years, and we feel that a debt of gratitude, which will not easily be discharged, is owing to the late Lord Playfair, who originated this scheme. Following the lead of this committee, the Nobel's Explosives Co. founded a research prize, independently of the aid which is being hoped for under the late A. Nobel's will, when the dispute anent the same is settled, and we trust that this year we shall be able to record several additions to the list of large industrial concerns that are thus assisting specific research. In a more general way the Hopkins Electro-Chemical Laboratory at Owen's College, Manchester, the prospective National Physical Laboratory, and the London Bacteriological Laboratory, as well as the collective improvements in existing institutions, all tend towards an extension of research work. That the outcome of this work, both directly and indirectly, will fortify the position of the chemical industry can hardly be doubted for a

moment in the face of the achievements of our Teutonic competitors with the weapon of persistent research. From among the mass of work that has been in progress we may mention the further study of liquid hydrogen and helium by Professor Dewar. The secrets of that "chartered libertine," the air, have been still further unmasked by Messrs. Ramsay and Travers by their discovery of krypton, neon, and metargon. Mons. H. Moisan has also raised substantial hopes of our being able to utilise the nitrogen of the atmosphere in the form of ammonia through the agency of his recently discovered calcium nitride. Dr. Perkin, jun., and Mr. Bentley have made strides in the synthesis of camphoric acid, while some most helpful and interesting investigations have been made upon the detection of phosphorus in animal and vegetable tissues.

It is difficult to briefly review the work of those who have been engaged upon investigations which bear more closely on

TECHNOLOGY,

for the past year has been prolific. One of the most interesting contributions to this class of literature was a paper by Mr. C. Dawson on natural gas in Sussex, which gave us a glimpse into the possibilities of the future. In harmony with our previous remarks we find much important work of an electro-chemical nature. Mr. E. Wilson has been studying the suitability of aluminium as an electrode for direct and alternate currents. The refining of zinc by the Hoepfner process is being put to a practical test, while Tommasi is engaged upon the electrolytic desilverisation of lead. Messrs. Franck, Collardeau, and Boubleque have applied the electric current to the manufacture of phosphorus, with the result that the price has been reduced, and production has been augmented in France and Russia; so that the practical monopoly which we have so long enjoyed is menaced. In Germany several new works have been projected. Of electro-chemical white lead processes we cannot make more than passing mention. Lunge and Cedercreutz have done much to forward the purification of acetylene. Dyers have had an indefatigable champion in Dr. Perkin, who has added to our knowledge of the yellow principle of tannin, of Puriri, a New Zealand dyewood, and several Indian dyestuffs. Mr. C. Smith has also investigated the yellow colouring matter of eucalyptus leaves. The researches which have been made upon the solubility of lead in a solution of ammonia have a practical bearing upon the manufacture of anhydrous ammonia and water analysis. Paper makers again receive attention at the hands of Messrs Cross, Bevan & Smith, by their study of the action of hydrogen peroxide on carbohydrates, while the light thrown by Mr. F. G. Edmed upon the constitution of oleic acid and its derivatives will assist candlemakers. Biology has assisted by the production of moulds capable of producing citric acid. Dr. Young has investigated the composition of American petroleum most opportunely, and another source of light has received additional benefit from S. Brauner's contributions to the chemistry of Thorium and the rare earths. In the way of destructive criticism, Tollens has shattered the hopes of obtaining spirits from moss and peat, for the present at all events, while Fritsche's scheme for getting alcohol from coke oven gases has made little progress. Liquid air seems in a fair way to pass from the sphere of the laboratory into that of commerce, though we think it well to speak with reserve upon a liquid so difficult to prepare or handle.

Gold seems to be as elusive as ever, and we have not heard much lately of Argentaurum; and we are likely to hear still less of the enterprising ecclesiastic who was recently astonishing our American cousins with a process for extracting gold from sea water.

We have thus gradually passed from studies which are essentially of scientific interest to matters which are mainly of commercial value, so that we naturally proceed to the

CHEMICAL AND ALLIED INDUSTRIES.

The year has brought a further report on dangerous trades, and considering the keen interest taken in the questions of phosphorus poisoning in match making, and lead poisoning in the potteries, the rules and regulations enforced are not so terrific as might have been apprehended.

Much controversy has arisen over standards for sewage purification and the testing of effluents, but it promises to result in a better understanding upon these most important points. They affect chemical manufacturers in a great many ways.

Bacterial processes of sewage purification are making headway, and if collectively they can do for the sewage of Manchester what individually they appear to have done in smaller towns, the task of enforcing the River Pollution Acts will be greatly simplified. The Salt Union has passed through a critical period, and it remains to be seen how matters will progress now that the head office has been transferred to Liverpool, and new blood has been introduced into the directorate. The Welsh coal trade dispute is now a thing of the past, but its lessons are being learned even yet. The perpetual smoke question may possibly progress towards solution by aid of the revised principles of combustion, as enunciated and tested by Schlicht. We have not heard of their being tried in this country yet, but the record in the United States is impressive. A striking instance of how the old order changeth is to be found in Volenite, the new electrical insulator, and vulcanite substitute. This year will see it on the market, we understand, not as a half-nourished premature stripling, but as a healthy youth whose powers have been cultivated by the preliminary training of practical application. It is significant that such a formidable competitor for rubber should originate from a waste product, the formation of which was not merely useless, but constituted a source of trouble and expense. The Workmen's Compensation Act has not lightened the already burdensome responsibilities of chemical manufacturers, but, thanks to the precautions against accident taken in most works, we have reason to hope that the chemical trade has not suffered greatly in this respect.

Many changes have taken place in the constitution of firms, there having been a marked tendency to amalgamate related interests by conversion into limited liability concerns. Thus in Messrs. Chance and Hunt, Ltd., we have the merging of two firms of long standing and repute. The dyewood trade was also focussed by the coalition of the businesses of Messrs. Mills & Bro., Mucklow & Co, J. Dawson & Co., and W. R. Scott & Co. The formation of Messrs. D. Thom, Domeier & Co., Ltd., is another example. Among other conversions there have been those of T. Tyrer & Co., Ltd., Brymbo, Ltd., Pease and Partners, Ltd., E. Cook & Co., Ltd., and Johnson & Hooper, Ltd. Erasmic Co., Ltd., was an offshoot of Messrs Crosfield & Sons, Ltd. Of the many new ventures we have quite lost sight of the Wenlock Electrolytic Co., Ltd., which started with a view to making chlorate of soda.

The two principal chemical lawsuits of the year were the White Lead Co., Ltd. *v.* Rhus & Co., and the Castner-Kellner Alkali Co., Ltd. *v.* The Commercial Development Corporation, Ltd. (Rhodin's patent). The dispute between the Badische Anilin und Soda Fabrik and the Basle Chemical Works was finally disposed of in the House of Lords, it being held that when a foreign manufacturer makes goods abroad, according to an English patent, to the order of a customer in England, and posts the goods to the customer at a foreign post-office, he does not infringe the English patent, as the sale and delivery took place outside this country. The consideration of these cases, which dealt almost exclusively with the rights of patentees, brings us by a most natural transition to

PATENTS IN 1898.

There has been a considerable falling off in the number of applications for letters patent; but as 1897 was a record year, this deficit is by no means an indication that the inventive faculty is declining. Before making such an inference we must take into account the number of foreign patents taken out by English inventors, and this number is on the increase. The following indicates, with a reasonable approximation to the truth, the distribution of chemical and allied patents:—*Chemical Apparatus*, 133; *Chemical Processes*, 490; *Electro-Chemical Apparatus*, 30; *Electro-Chemical Processes*, 50; *Oils and Fats*, 32; *Boiler Disincrustants*, 6; *Artificial Stone*, 3; *Paints and Pigments*, 20; *Soap*, 23; *Explosives*, 19; *Sewage*, 46; *Smoke Prevention*, 12; *Artificial Fuel*, 10; *General Hygiene*, 12; *Artificial Manures*, 8.

The feature of the year, however, has been the successful issue of the test case, instituted by Messrs. Levinstein, Ltd., to demonstrate the ineptitude of those sections of our Patent Laws which control the granting of licences. The enlightenment of the Board of Trade and the interest taken by Chambers of Commerce will, we hope, result in the re drafting of these clauses on more effectual lines.

LEGISLATION

has not been very much to the fore, save in connection with dangerous trades. This year promises to be a heavy one in the matter of private Bills; about 363 have been deposited against 332 in the previous year, which number is exclusive of those Bills for which plans are not required. Electric lighting provisional orders number 114, an increase of 29. Moreover, we understand that the Government intend to pay more attention to commercial legislation during the next session. Business men have for some time past been urging on the attention of Parliament a number of measures which concern the well-being of British trade, but the congested state of legislation has hitherto prevented their being successfully engineered when introduced by private members. Consequently, the Government has been approached with a view to furthering the more important items. The departure is an important one, and is partly due to the fact that commercial men have become more united of late. The decision of the Manchester Chamber of Commerce to become affiliated with the Associated Chambers has had some weight with the Government in its attitude towards commercial questions.

In conclusion, there are a few

MATTERS OF GENERAL INTEREST

which are noteworthy, but still hardly fall under the headings we have adopted.

After a lengthy inquiry the Board of Trade have formulated its regulations and definitions affecting the use of explosives in coal mines. The conditions enforced will undoubtedly benefit miners in the matter of health and general comfort. Incandescent gas lighting has made rapid strides, and the parent company have introduced such a substantial improvement through the agency of their chimneyless self-adjusting burner that they can have little to fear from the few competitors who have survived the ordeal of the Law Courts.

The poor man's illuminant—oil—has also changed for the better. Healthy competition has done more to furnish him with an oil which is of a sufficiently high flash point to ensure reasonable safety, than all the Government inquiries of the last thirty years. And yet almost everybody, except the 600 gentlemen who are supposed to foster the interests of their constituents, could see that competition was the one thing the principal producers of low flash oil feared most, and strenuously fought to suppress.

All interested in the purification of works effluents and sewage are hoping for more business-like procedure now that the reorganisation of the Local Government Board is within measurable distance.

With the close of the year we find the London County Council addressing itself seriously to the control of the London domestic water supply, while the much talked of sea-water scheme has blossomed into action. The Fire Prevention Committee has also taken definite shape, and has already embarked upon a helpful and promising propaganda.

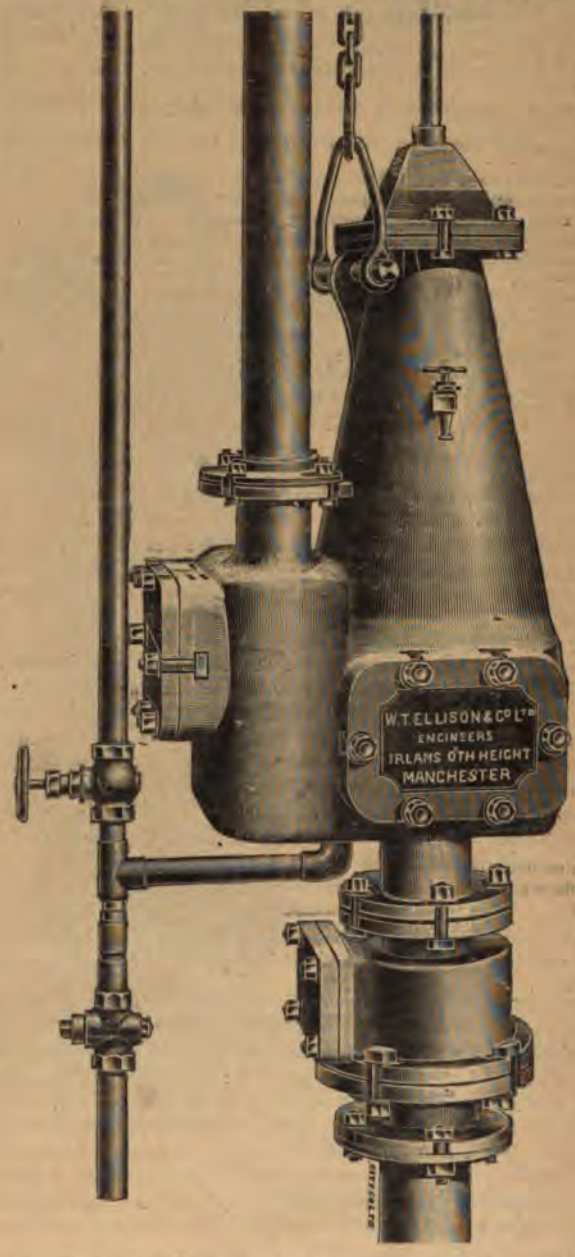
As regards the future, the rapidity of industrial progress is yearly making the wail of the past louder and more bitter, but this wail is always with us, and seldom teaches us much that is of use in the struggle of the moment. With commercial artificial indigo, artificial silk, new colours, synthetic albumen, anti-toxines, and fertilizing micro-organisms, it is hard to forecast the future, but it is certain that it can only be successfully coped with by forgetting the disappointments of the past in renewed efforts to keep a front place in the ranks of the present. *Scientia est potentia* and Bacon's maxim is truer to-day than it has ever been.

AMALGAMATION IN THE SOAP TRADE.—We learn that arrangements are in progress for amalgamating the businesses of Messrs. Brooke and Messrs. Lever Bros., the makers of "Monkey Brand" and "Sunlight" Soaps. A meeting has been called to consider the matter.

MESSRS. FUERST BROS.—We have just received a new price list from 17, Philpot-lane, the address of the above firm, who make a specialty of fine chemicals, essential oils, and photographic chemicals. We have often referred to their patent developers, fixing salts, and "Lumière" dry plates in these columns, and we should recommend any of our readers who are interested in this kind of work—and cinematography—to look over their revised price list.

THE "NIAGARA FALLS" STEAM PUMP.

THIS pump is of the now much-used pulsating type. It consists of a single vessel divided vertically into two equal compartments by a division plate, which acts as a condenser to both sections. The steam inlet is at the top of the chamber, and immediately beneath it an angular or two-winged valve is suspended, which has its centre of gravity below the point of suspension, thereby rendering it much more



sensitive, and diminishing the steam power required to operate it. This valve opens one and closes the other aperture, by which the steam is admitted simultaneously and with one movement, thus securing the greatest possible speed in action and in effective work.

The sole makers are Messrs. W. T. Ellison and Co., Ltd., Irlam-o'-th'-Height, Manchester. The fact that the pump works as well at an angle as when quite vertical presents many advantages. It is made in 14 sizes, with capacities ranging from 1,000 to 200,000 gallons per hour, the price rising from £7. Many pumps of this kind stop working when the steam pressure becomes low, but this make will go on pumping down to a pressure of 1lb. of steam.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Manufacturing Coal Briquettes. A. Zendroni. 475. January 9.
Manufacture of White Lead and Recovery of Silver. A. C. J. Charlier. 552 January 10.
Purifying Waste Greasy Waters. J. Delattre. 555. January 10.
Drum for Storing, etc., Calcium Carbide. L. White and T. Geveran. 557. January 10.
Extracting Oil from Nuts. T. C. Graham, J. H. Kellogg and W. K. Kellogg. 577 January 10.
Electric Carbide Furnaces. Tinker & Holliday, Ltd., and W. Cardno. 699. January 11.
Purifying Acetylene Gas. Sir C. S. Forbes. 702. January 11.
Drying Apparatus. C. A. Sahlström. 717. January 11.
Evaporating and Distilling Liquids. C. A. Sahlström. 718. January 11.
Extracting Gold from Slimes. R. Kirkman. 777. January 12.
Refrigerating Machines. F. W. Tannett-Walker and D. McGill. 791. January 12.
Centrifugal Pumps for Acids, etc. E. F. and W. Marsh. 833. January 13.
Sulphur Bandages. J. Young. 834. January 13.
Boracic Acid, Borax, Ammonia, and Ammonium Nitrate from Borates of Lime and Magnesia. C. Bigot. 861. January 13.
Manufacture of Ammonium Nitrate. J. Boulton. 914. January 14.
Manufacture of a Complex Carbide and Gas therefrom. C. de Ricaris. 940. January 14.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in Separating, Purifying, and Analysing Mixed Waste Acids and Apparatus therefor. J. Sharp, Shirley Manor, Wyke, Yorks. Eng. Pat. 1,574. January 19, 1898.

This apparatus is designed chiefly for the treatment of the mixture of sulphuric and nitric acids left from the manufacture of picric acid. The acids are heated in a shallow rectangular tank, constructed of stone, and lined with lead, which is built over a furnace, and heated from end to end by suitably arranged flues. The latter are covered by iron plates, which are in turn covered with a layer of sand, so that the tank sits on a sand bath as it were. The tank is covered, and provided with charging facilities and an outlet pipe, which carries off the nitric acid and other fairly volatile acids to condensing towers. The sulphuric acid is finally left in the tank, the temperature of the distillation being regulated to achieve this end. There are six figures.

Apparatus for Churning White Lead and Oil into Pasty Condition. G. Bischof, 21, Victoria-street, Westminster. Eng Pat. 3,582. February 12, 1898.

The apparatus consists of a covered vat, in which a piston rod works vertically. Attached to the rod are beaters, made of circular discs, the upper faces of which are rounded or bevelled, so as to reduce the resistance on the upward stroke, while the under sides are flat, thus giving a maximum beating effect on the downward stroke. Oil is run in through a hole in the cover, after the beaters have been put in operation. When the white lead and oil are properly compounded, the pasty mass settles at the bottom, and the excess oil collects upon it. This oil is removed by a special draw-off cock, and the paste removed through a lateral hole near the bottom of the vat. There is one figure.

Improvements in the Extraction of the Benzols contained in the Heavy Oils, and in Classifying or Fractionating the several Hydrocarbons which accompany the Benzols. S. Pitt, Sutton, Surrey (communicated by Soc. Anon. pour la Construction des Appareils Savalle, 93, Avenue d'Orléans, Paris). Eng. Pat. 19,321. September 10, 1898.

The heavy oils are passed down steam-bubbling columns, or plain distillatory columns fitted with baffling plates, according to their nature. A steam regulator keeps the vapours driven off (which include benzol and the higher hydrocarbons up to and including naphthalene) at a temperature between 97 and 98° C. If these vapours were merely condensed, only a very crude product would be produced, but by conducting the cooling slowly and in progressive stages, advantage can be taken of the varying condensation points of the different products when mixed with steam. By gradually reducing the temperature in the "hot condenser" to about 80° C. all the water, naphthalene, and higher hydrocarbons are removed, with very little separation of benzol and toluol, these products passing forward in the gaseous state to an ordinary refrigerator, where they are condensed. The small quantities of these products separated in the "hot condenser" are recovered by the usual subsidiary distilling column. There is one figure.

Improvements in the Manufacture of Acetone and in Apparatus therefor. F. Hurter (and his executrix) and The United Alkali Co., Ltd., both of 61, Exchange Buildings, Liverpool. Eng. Pat. 2,816. February 3, 1898.

By passing acetic acid vapour over the carbonate of an alkaline earth, such as lime or baryta, at about 500° C., it is decomposed into acetone, water, and carbon dioxide. It must, however, be brought into intimate contact with the carbonate, and this patent deals mainly with the attainment of this end. Thus, pumice stone or other porous material is soaked in a strong solution of acetate of lime, dried, and heated to 500° C., when the acetate decomposes, forming acetone, leaving the desired calcium carbonate in the interstices of the pumice, which is ready for use in the decomposition of acetic acid vapours.

Improvements in the Production or Extraction of Glycerine from Waste Products. Countess R. de Diesbach, Chateau Permaugies, Montdidier, Somme France. Eng. Pat. 9,599. April 26, 1898.

Glycerine is recovered from the wash left after the distillation of alcohol, by first concentrating at about 70° C., so as to deposit the chlorides, tartrates, and other salts in solution. The concentrated wash is then neutralized with lime or soda (the salts so formed being removed), and finally distilled by superheated steam under reduced pressure. On reaching 30° C. a vacuum of 50 centimetres is created, and must be maintained until the final temperature of 190° C. is attained. There is one figure. The condensing worm is branched and duplicated at the still-head, so that when the glycerine begins to come over, it can be diverted into a separate coil.

THE "BOWERS" DRIER.

IN our last Special Issue we referred to the "Bowers" drier and carboniser, which was then, as it were, upon its trial. We are now pleased to be able to report that the apparatus has been in, practically, continuous operation from that date to this, and has completely realised Mr. Bowers' confident anticipations of its capabilities

Roughly speaking, half the time of the machine is spent in drying wet logwood waste and the other half in carbonising the dried residue; and though, as will readily be understood, this is a very severe test, the apparatus has stood the trial without a hitch; its carbonising efficiency working out somewhere between 70 to 80 tons of material per week.

Encouraged by the success of the first installation Mr. Bowers has just put down a second, on exactly the same principle, but differing somewhat in its dimensions. This will be used entirely as a drier to feed the first apparatus, which will then be employed as a carboniser only.

With the necessary modifications to suit the different circumstances, we have no doubt that this apparatus might find many other useful spheres of influence outside the wood carbonising industry, to which Mr. Bowers has hitherto confined his attention.

With the substitution of a safe heating medium for an open fire, it would provide an excellent drier for solvent-extracted meals, and as these represent an industry now coming to the front we shall not be surprised to find that our hint has received attention.

Many other fields of usefulness might be suggested, but we need say nothing further, as we have no doubt that on application to Mr. Hadfield Bowers, Brookfield Chemical Works, Gorton, Manchester, any *bonâ fide* curiosity can be easily satisfied.

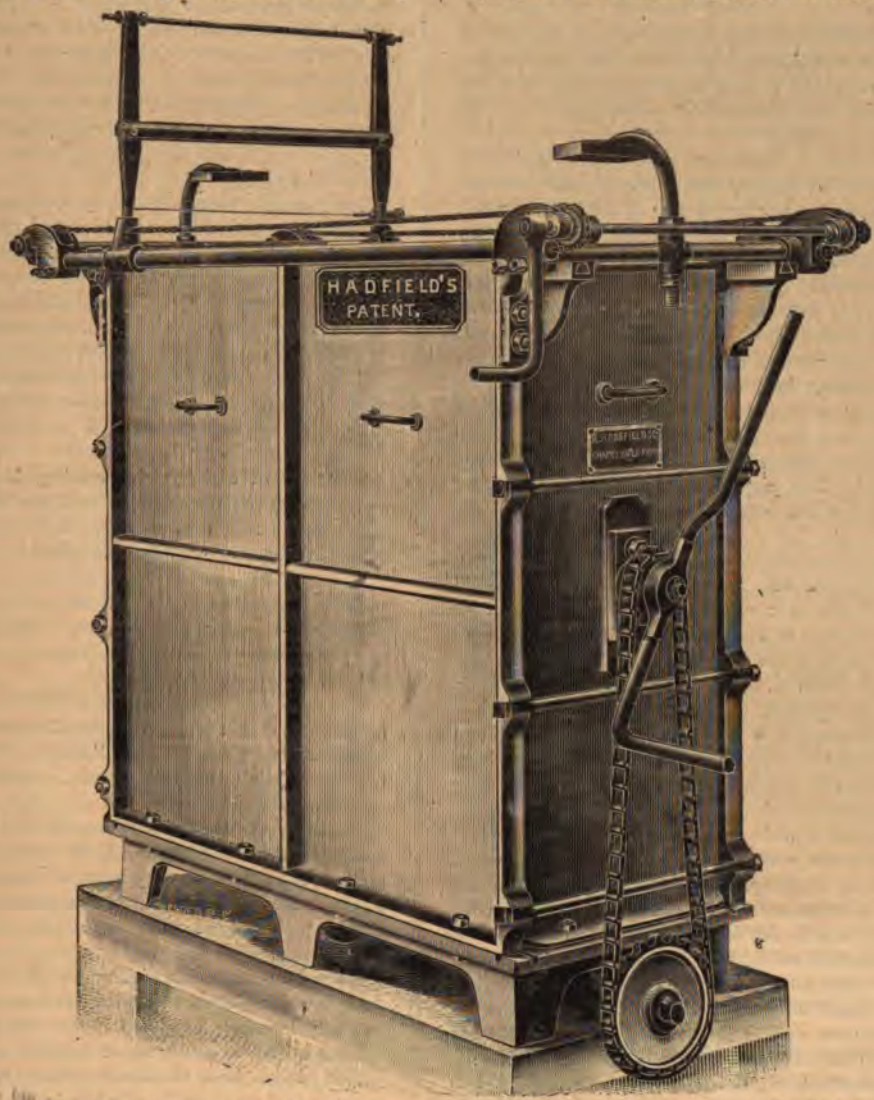
Oil, Paints, and Soap.

COMBINED SOAP FRAME AND CUTTING MACHINE.

Below we illustrate a patent combined soap-lifting frame and portable slab cutting machine for lifting soap and cutting it up by the simple operation of turning two handles, thus doing away entirely with the cumbersome and lengthy process of unbolting frames and cutting by hand.

The machine consists of an ordinary soap frame fitted with a rising and falling table operated by a handle as shown, which lifts the soap vertically against an adjustable stop or gauge. The soap is then cut off into slabs by the horizontal cutter. The latter consists of a light portable tube frame, carrying two cutting wires adjustably fixed in a bow frame which slides along the parallel guides when operated by the handle at one corner of the frame. The gearing can be applied to ordinary existing frames. There is no leakage, and the cost is by no means excessive. The saving in time and labour is great, as two men and one boy can do the work of four men, and yet take less time than was necessary with the men. Another advantage is that crutching can be conducted with perfect safety, no matter what the temperature of the soap may be when run into the frame.

We understand that the patentee, Mr. Harry Hadfield, Yeardsley View, Furness Vale, near Stockport, is open to sell the patent rights.



ANTI-FOULING COMPOSITIONS.

[SPECIALLY CONTRIBUTED.]

When a ship proceeds to sea it is found that the hull usually becomes covered to a greater or less degree by the growth of seaweed, shellfish, etc., which have become attached to it during the voyage. This growth is found to materially affect the speed at which the vessel travels, often reducing it by miles per hour. In bad cases of fouling the speed has been reduced 20 per cent. The extent to which these animal and vegetable growths attach themselves depends upon a good many factors. First, the particular ocean has a great influence. Those portions of the Atlantic, Pacific, and Indian Oceans, situated in the region of the tropics, teem with life of various kinds, and these readily attach themselves to a ship, and it is nothing uncommon to find a vessel which has been on a voyage in those seas completely covered with growths below the water line. The colder Arctic and Antarctic Oceans are freer from life, and hence vessels sailing in these seas are not so liable to be fouled. Then, again, it is found that wooden vessels are more liable to be fouled than iron ones, as if the greater roughness of the surface gave a firmer foothold for the growths. The speed of the vessel has some influence. The quicker it travels the less liable it is to fouling.

This evil has existed for years, and many have been the attempts made to reduce it. Some have been partial successes, but others have been complete failures. The method most generally pursued is to prepare an "anti-fouling composition," as it is called, somewhat of the nature of a paint or varnish, and apply it to the hull of the ship

The variety of substances which have been used at one time or another in making these compositions is very great, and a mere enumeration would fill a page of this journal. Some compositions appear to be put together without rhyme or reason.

It unfortunately happens that information as to the action of anti-fouling compositions is very scarce, and we are still much at sea as to the conditions which will best prevent these growths on vessels.

It is proposed here to describe some of the anti-fouling compositions that have been made, and point out the reasons why they failed.

One formula for a composition is :—Mix 20 lb. of gallipoli oil, 25 lb. of common resin, and 50 lb. of turpentine. To this mixture is added 10 lb. of sulphuret of copper reduced to an impalpable powder and two parts of antimony sulphide.

This is a kind of varnish which will dry with a soft coat that will not be strongly adhesive to the ship's hull, and it is quite possible that the friction of the water may tend to strip it from the ship's side. It is thought that the copper and arsenic will act as poisons to the barnacles, etc., but that is doubtful.

Another composition consists of asphaltum, naphtha, heavy oil from gas tar or coal tar, sulphate of copper, white arsenic, and creosote mixed together in about the following proportions :—Asphaltum, 7 lb. ; naphtha, 4 lb. ; heavy oil, ½ lb. ; sulphate of copper, ¼ lb. ; white arsenic, ¼ lb ; creosote, 2 ozs. The asphaltum is melted by heat, and to it is added enough naphtha to give the mixture the consistency of paint when cool. After this mixture is cooled a preparation of the remaining ingredients is added. These are mixed together as follows : The sulphate of copper is pulverised and heated until it is quite free from its water of crystallisation ; to this is added an equal quantity by weight of white arsenic of commerce and also enough creosote to form a paste ; the heavy oil is then added, and the mixture is ground until it becomes quite smooth, after which naphtha is added sufficiently to make the mixture liquid. The preparation thus obtained is stirred into the first mixture, and when both are thoroughly combined the compound is ready for use.

A composition which has been much used is made in the following manner:—Ten gallons of palm oil, 10 gallons of raw linseed oil, 2 gallons of boiled linseed oil, 14 lb. of arsenic, 6 lb. of red lead, 6 lb. patent driers, and 4 lb. of oxide of iron. Of these the raw and boiled linseed oils, arsenic, red lead, driers, and oxide of iron are first mixed together, and then with the palm oil while that oil is in a boiling state, the whole being well mixed together.

Before applying the composition it is preferable to give the bottom of the ship or vessel two coats of zinc-white paint with which has been mixed a small quantity of oxide of iron. About two coats of the composition may then be applied.

A very similar preparation is made by substituting palm oil for the raw linseed oil, in which case a soft buttery mass is obtained which has to be made hot before applying. The active ingredient in this composition is supposed to be the arsenic, but this article is very variable in its action. Sometimes it kills, but as an ingredient in anti-fouling compositions it cannot be relied on for being efficacious in all cases.

Copper compounds are well known to be poisonous, and hence they are frequently added to anti-fouling compositions, and they give much more satisfactory results than arsenic preparations, for they are more certain in their effect. One such composition is made as follows :—Melt by the heat of steam 25 lb. of Trinidad or other pitch or resin, to which, when thoroughly melted, add 35 lb. of prepared halk, made by washing out all particles of sand, and afterwards drying and grinding to a fine powder When these are well mixed, add 25 lb. of carbonate of barytes in powder, and 5 lb. sulphate of copper in powder. The whole being well mixed and allowed to cool down to 100°, add as much crude naphtha or spirit of turpentine as will make it of a consistence fit to be used with a brush.

Another formula for a composition containing copper is the following :—

Palm oil pitch	25 lb.
Carbonate of copper	25 ,,
Arsenic	20 ,,
Turpentine	25 ,,
Linseed oil	5 ,,

Another composition consists of arsenic, acetate of copper, acetate of zinc, linseed oil, turpentine or benzine, and palm oil or tallow pitch. The substances are mixed in about the following proportions, viz. :—Palm oil pitch, 15 lb. ; acetate of copper, 20 lb. ; acetate of zinc, 10 lb ; arsenic, 20 lb. ; turpentine, 25 lb. ; linseed, oil, 10 lb.

It is recommended that the ship's hull should first be painted over with two coats of palm oil or tallow pitch. This effectually prevents the water from coming into contact with the metal, and consequently precludes any galvanic action or oxidation. A coating of the composition is then applied over the tallow or palm oil pitch coat. The greater portion of the arsenic will probably combine with the copper and zinc, forming a combination which is a very active poison.

Another composition which was in vogue some years ago is made from 5 lb. of raw white lead, 4 lb. of the best hard wood charcoal, 2 lb. of litharge, 2 lb. of verdigris, 2 lb. of yellow orpiment, 12 lb. of the best boiled linseed oil, more or less, to make a mixture of suitable consistence. The solid ingredients are to be reduced to an impalpable powder, and the charcoal first mixed with a small quantity of the oil, the other ingredients being added thereto gradually, and the whole mixed thoroughly.

The following composition contains copper and zinc. It differs from those hitherto given, in that it is essentially a spirit varnish.

The proportions are—2 lb. of shellac, ½ lb. of seedlac, ½ lb. of gamboge, ½ lb. of gum benzoin, 1 lb. of red lead, and 1 gallon of spirit or wine. This composition is brushed over the surface as a first coating ; then, for the second coating, the same composition has added to it 1½ lb. of white oxide of zinc and 1½ lb. of French verdigris.

Some preparations which have been brought out have been of a most complex character, and often entail the application of several distinct coats, differing from one another to a considerable extent, such as the following :—

The first, or anti-corrosive coating, is prepared as follows:—Best asphaltum, 20 lb. dissolved in naphtha until complete saturation has taken place ; add 1 lb. of shellac and 1 lb. of beeswax. One, two, or more of these coatings may be supplied.

The second coating is prepared as follows:—Dissolve 20 lb. asphaltum in naphtha, to which add 1 lb. of phosphorus, dissolved in bisulphide of carbon ; shellac, 10 lb., dissolved in methylated spirits ; mix the shellac solution with the asphaltum and phosphorus ; the whole to be of the consistency of varnish.

The third anti-fouling coating is applied last. It is prepared in the following manner :—Take of phosphorus 2 ozs., of gutta percha 500 lb. ; bisulphide of carbon, 2,000 lb. Dissolve. When passed into solution, add turpentine ½ lb. ; one, two, or more applications of this coating may be applied.

Metallic copper and zinc or bronze have been used in making anti-fouling compositions by mixing them with shellac, varnish, or ordinary paint composition, but they have not been found to be of very great service. Somehow or other the copper fails to exert its full poisonous effect ; probably the paint or varnish which accompanies it acts as the preventive.

A duplex composition which was offered some time ago consisted of the following :—First, 7 lb. yellow wax, mixed with sufficient white lead, into a paint ; this is painted in the usual way over the ship's hull. Second, a paste or putty, which is spread with a trowel over the paint.

This putty is made as follows :—Take 10 lb. of wax and oil mixture, made as above, and 15 lb. of white lead ; to this add 15 per cent. of bioxide of mercury, and 15 per cent. of arsenic acid, or simply 20 per cent. of bioxide of mercury.

Mercury and mercurial preparations have been used in various forms in these compositions, and the following is an example : — One gallon of a solution of rosin, in turpentine, made by dissolving with the aid of heat 10 lb., by weight, of rosin in 1½ gallons of solution of gutta percha in spirit of turpentine. To each gallon of the compound obtained by mixing these two fluids is added 5¾ lb. of bichloride of mercury ; when thoroughly incorporated there is added equal weight, namely, 5¾ lb. of lead ; for the purpose of giving it due consistency the whole is then thoroughly mixed. Thus prepared, the mixture is applied directly as a coating for the vessel, or, if necessary, it may be rendered more fluid by adding a small quantity of turpentine.

Anti-fouling compositions may roughly be divided into two kinds, quick drying and slow drying. The quick-drying compositions are made with methylated spirit, petroleum or shale naphthas, benzoline or turpentine mixed with rosin, or resinous matters of various kinds, the necessary colouring, and poisonous agents. These dry in a comparatively few minutes, the time varying according to the particular solvent used and other circumstances. The writer is not inclined to view this class of compositions with much favour; owing to their peculiar composition they have a strong tendency to leave behind a hard, flaky coat which tends to chip off, the amount of adhesiveness between such compositions and the surface coated being small. Chipping off is a fault which should be avoided. The resins used in making the composition will coat up those ingredients used as poisons, and will materially retard their action by reducing the degree of absorption by the barnacles, etc. Another important feature of the quick-drying compositions is that they are all inflammable, and, therefore, considerable care must be exercised in storing and using them to prevent accidents.

Slow-drying compositions contain linseed oil and linseed oil varnishes as their essential ingredients, and, as is well known, these dry but slowly. On the other hand, their power of adhesion to the surface which is coated is greater, and so such compositions are much more durable in character, and they are much less dangerous to store and use than the quick-drying compositions.

It seems to the writer that there is no advantage to be gained in using a varnish made from a resin. There are some authorities who think that the smoother surface left by varnishes does not allow as firm a foothold for the barnacles, etc., as a rough surface such as is left by a paint, but this is rather doubtful. A good oil paint is all that is necessary; do not let this be overloaded with colouring matter, but rather let it be charged with poisonous ingredients—copper, arsenic, or mercury compounds in preference to all others. It may be that two coats could be given; the first, of a paint of any desired colour; the second, of an oil paint charged only with poisonous preventive agents.

Coating the ship with such substances as tallow is not by any means reliable; the coat soon wears off.

"SIDEROSTHEN" ANTI-CORROSIVE PAINT.

[SPECIALLY CONTRIBUTED.]

Anti-corrosive is a term applied rather indiscriminately to many paints which deter for a time only the corrosion of the metal they cover. All these paints are very liable to blister and chip, leaving exposed parts which quickly suffer. Many such paints, while remaining apparently intact permit rust to form underneath.

In these days of enormous iron structures, the waste from corrosion is so great that engineers are always on the look out for a paint which will prevent rust and remain on the metal in spite of vibration. There is no doubt that in Siderosthen a paint has been found which will really give this much desired result, and those who have tested it long enough to allow them to speak with confidence agree that the term anti-corrosive may certainly be applied to it.

One of the special points in which it is superior to most paints of this kind is its power of decomposing rust on ironwork and preventing further oxidation. As an instance of this, we may mention the case of an unpainted boiler, which was exposed until a thick coat of rust had formed. Part of the boiler was then painted with Siderosthen without scraping off the rust, and part not, and the boiler again exposed to the weather. On examining it some time after, the Siderosthen paint was scraped off, and the metal underneath was found to be absolutely free from rust. When the tremendous cost of scraping all the rust off a large area of ironwork before painting is taken into account, the commercial value of this special property stands out very strikingly.

Another peculiarity of the paint is that of drying outwards, *i.e.*, from the substance painted towards the atmosphere, thus rendering it impossible for any air-space to get between the metal and the paint, and avoiding all fractures in the surface by blistering.

It may be exposed to high temperatures on boiler plates, flue doors, etc., as it is not affected by a reasonable heat.

When the insides of the boilers are painted with it, it forms an effectual insulating layer between the incrustation formed and the walls of the boiler, from which the incrustation can be removed without difficulty.

The following description of some experiments which have been conducted with this paint will give a good idea of its properties and applicability:—

Siderosthen has, when ready for use, the character of thin oil colour, and can be put on as such. The colour of the dry coat is blue-black, and glossy. Brushes, after use, can be cleaned by washing them in benzine, or by letting fatty oils soak into them, and afterwards washing with soft soap and soda.

On painting rusty iron, it is only necessary to scrape off the loose scale of rust formed thereon. Superficial rust on the iron does no harm, as the paint easily penetrates the rust and gets into contact with the metal underneath. Rust particles which may become incorporated with the paint do not harm it in any way. A coat of Siderosthen dries in a few hours. The drying takes place quicker at a high temperature than at a low one; in the open air quicker than in a closed room. The moisture of the air has no influence. If a perfectly dry coat of Siderosthen is exposed to a temperature of 244/266° F. it will get soft, and then hard again. Afterwards, a temperature up to 482° F. has no influence on it at all. The coat now consists almost entirely of carbon.

1. A plate painted with Siderosthen was exposed to the open air for twelve months. No change in the paint took place whatever.

2. A plate painted with Siderosthen was put into clean water of the same temperature as the air about it for a year. No change took place.

3. A plate painted with Siderosthen was put into water of a constant temperature of 194/203° F. for six months. The paint lost its glossy appearance and got dull, but was, in other respects, quite unchanged.

4. An iron plate painted with Siderosthen was, five days after having been painted, hung up in a boiler filled with soft water, so that it was partly in the water and partly in the steam. The boiler was then heated up to a temperature of 320° F. On the portion of the plate which was in the water the paint completely disappeared. In the steam the paint was still on.

5. An iron plate painted with Siderosthen was, after drying for five days, exposed for two hours in a temperature of 248/266° F. The paint softened and then became hard again. Then the plate, as in No. 4, was hung up in a steam boiler heated to 320° F. In this case, the paint was also unharmed where it had been in contact with the water.

6. A plate painted with Siderosthen was, for six months, kept in a closed vessel containing concentrated solution of ammonia in water. No change in the coat.

7. A plate painted with Siderosthen was, for six months, kept over muriatic acid. No change in the paint.

8. A plate painted with Siderosthen was, for six months, kept over nitric acid. No change in the paint.

9. A plate painted with Siderosthen was, for six months, kept over *aqua regia*. No change.

10. A plate painted with Siderosthen was kept over liquid bromine. The coat came off altogether.

11. A plate painted with Siderosthen was, for six months, kept in a concentrated solution of sulphurous acid in water. No change in the paint.

12. A plate painted with Siderosthen was, for six months, kept over concentrated acetic acid. No change.

13. A plate painted with Siderosthen was, for six months, kept in natural sea water. No change.

14. A plate painted with Siderosthen was, for six months, kept in a 10 per cent. salt solution. No change.

The properties of this paint make it very valuable in chemical works, paper mills, etc., as it withstands chlorine, sulphur, ammonia, and acid fumes. It has been used with great success in such works, upon girders, tanks, and all kinds of iron work, where ordinary paint would not have stood more than a few weeks; and its use will be more largely adopted as manufacturers realise the large sums lost yearly through the deterioration of machinery, buildings, and plant for want of a good protective covering.

WEATHER PROOF COLD-WATER PAINT.

The "Galley" brand of cold-water paint, which is made by Messrs. Thos Hinshelwood & Co., Oil and Colour Works, Glasgow, is a distinct novelty, and what is more a composition which will prove a boon to many engaged in the chemical trades. It is fire and weather proof and not devoid of a certain disinfecting power.

It is a powder which mixes readily with cold water, and can be applied with any brush in the usual way. When dry it forms a hard enamel-like surface which cannot be washed off. It is furnished in a wide range of tints, many of which are as artistic as the paint is useful. The paint, when mixed, does not set, and its covering power is good. One coat covers better than two coats of oil paint or distemper. Its use is not attended with any excessive trouble or extraordinary precautions.

When mixing for use, two parts powder are added, slowly, to one part cold water. This will form a thick paste which must be stirred thoroughly until all lumps are removed Allow this paste to stand 15 minutes, stirring it several times. Then thin down with cold water, adding a little at a time and stirring constantly until the mixture is of the consistency of good cream. It is then ready for use. When applying, brush it on well like oil paint.

If applied over old paint or whitewash see that all loose particles are carefully removed, as it must have a firm, dry surface to adhere to. If allowed to stand over night, remove the skim coat from the top before using again.

AMERICAN PHOSPHATE INDUSTRY IN 1898.

THE operations during 1898 have been widely scattered, owing to the opening up of new deposits. In Florida, South Carolina and Tennessee miners have increased their shipments, and are exporting considerable rock, notwithstanding the competition of the Algerian and other foreign phosphates. An encouraging feature during the past year has been the better prices both here and abroad, and it is believed that 1899 will see a still further advance in this direction. On the other hand, the working of phosphate deposits is being prosecuted more economically, and the facilities of transportation are becoming more and more favourable to the producer.

Much the larger part of our exports is made up of high-grade Florida rock, but there is also a good demand for Tennessee and South Carolina. Our largest consumers abroad are found in Europe, especially in Germany. We have also shipped a considerable amount of phosphates to Holland, and some have gone as far east as Japan and Australia. In the case of Florida rock the exports from January 1st to November 30th, 1898, amounted to 334,708 tons, against 329,325 tons in 1897, and 291,540 tons in 1896. These exports were distributed as follows: To Continental ports, 196,585 tons, against 176,372 tons in 1897, and 148,022 tons in 1896; Baltic ports, 98,186 tons, against 95,646 tons in 1897, and 82,358 tons in 1896; United Kingdom ports, 27,959 tons in 1898 against 27,385 tons in the previous year, and 20,693 tons in 1896; Mediterranean ports, 11,978 tons, against 29,922 tons in 1897, and 39,467 tons in 1896. Prices for high grade rock have risen from about 5 dols. to 9 dols. per long ton, f.o.b. Fernandina, and land pebble is quoted at 5 dols. 50 c. to 6 dols. delivered in New York.

Concerning the South Carolina industry our special correspondent advises us that the entire year's business of crude rock and manufactured fertilisers has been a most unusual one for Charleston; the production of land phosphate rock has been very good indeed and has reached 249,000 long tons, and the consumption amounted to 185,000 long tons, 90 to 95 per cent. of which is high grade land rock. The consumption at Beaufort for several years past has been 10,000 to 15,000 long tons, and from this year's business it is estimated at 12,000 tons, doubtless all river rock. The shipments of South Carolina phosphate rock during 1898 amounted to 199,187 long tons. The exports were made largely through Beaufort, and were made principally to the United Kingdom, while some found their way to the continent of Europe and to Japan. The miners have been and are still very stiff on their asking prices of 3 dols. to 3 dols. 25 c. for high grade kiln dried land rock, 60 per cent. bone phosphate of lime, guaranteed, although it runs about 62 per cent. A decline is in no way probable, but miners will hardly attempt to advance prices to any extent, as it would only invite competition from the higher grades of Florida and Tennessee rock. No quotations can be given on ground rock, as there has been no business done in it since the failure of the Wappoo Mills last spring. River phosphate rock, 55 per cent., guaranteed, but running 57 to 58 per cent., is offered at 2 dols. 80 c. to 2 dols. 90 c. alongside vessel at Beaufort. Local manufacturers have been pretty well supplied with phosphate rock at about the usual prices existing for some time past, 3 dols. 15 c. to 3 dols. 25 c. for high grade kiln dried land rock, delivered at the works, and two large manufacturers have made some satisfactory contracts for several years ahead. The large buyers of local plants have one contract for 200,000 tons delivered within the next five years at about 2 dols. 75 c. for one of South Carolina's best land rocks, and have also bought a large and good deposit of high grade rock, and will soon start mining it themselves. They have also secured lease of another tract of a little lower grade, which is now being mined. And there are also pretty strong rumours of a very large deal with the owners of South Carolina's largest land rock deposit. The most unusual part of 1898's business was the large shipments of acid phosphate to the following ports by sail: Baltimore, 15,158 tons; Alexandria, 1,694 tons; Philadelphia, 460 tons; Norfolk, Va., 3,273 tons; Georgetown, D.C., 675 tons; Richmond, Va., 4,213 tons; total, 25,423 long tons, which reduced to short tons is 28,530, the heaviest ever known in the trade. Acid phosphate has been quoted at 5 dols. 75 c. to 6 dols. cash for bulk, f.o.b. cars or vessels, at factory of sellers, for 13½ to 14 per cent., available phosphoric acid, and bagged and tagged for 13 per cent. goods, 7 dols. to 7 dols. 25 c., f.o.b. cars or vessels as above, and ammoniated goods, 2½ per cent. ammonia and 2 per cent. potash, bagged and tagged as above, at 14 dols. 50 c. to 15 dols. Very little, however, has been done in ammoniated goods, and that sold up to date is due more especially on account of the increased planting of wheat in Tennessee, North Carolina, and South Carolina in 1898, and Charleston has gotten its full portion of it.

In the Tennessee field there have been many changes in concerns as well as in operations, and promising new beds of phosphate have been uncovered during the year. Railroad facilities have been improved, and there has grown up quite an export demand for this article. The two producing centres in this State are Mount Pleasant, in Maury County, and Polita, in Hickman County. At the latter place the largest shipments were made by the Duck River Phosphate Company, and at Mount Pleasant there are not only several large producers, but also many small miners. The chief shipping ports are at Centerville, Twomey's Switch, and Aetna. The increasing demand has induced the miners to raise prices, from 1 dol. 45 c. per ton early in the year, to 2 dols. 20 c. and 2 dols. 30 c. in December, f.o.b. Mount Pleasant, according to quality.

Freight rates for the latter part of the year were, from Tampa to Ghent, 20s, and to Yokohama, Japan, 50s.; Coosaw to Dublin, 19s., and to London, 18s. 6d.; Fernandina to Rotterdam, 18s. 3d. to 19s. 6d. per ton.

The investment of new capital in developing the phosphate industry has encouraged increased exploitation of new deposits, and as the year closes the situation is very encouraging, and 1899 promises many good things.

MESSRS. BRUNNER, MOND, & CO. AND THEIR WORKMEN.—Sir John Brunner, while addressing his constituents at the Gladstone Club, Northwich, on Tuesday, was interrogated as to a notice issued by the firm of Messrs. Brunner, Mond, & Co., to the effect that no new men over the age of thirty years could be employed. This notice has caused intense feeling in the district. In replying, Sir John said that twelve months ago the directors had decided that when a man had served the firm long and faithfully they would provide for him for the rest of his days with a certain limited weekly amount. He put it to them—was it fair that men should go to the works at the age of fifty years, and after a few years's service ask for a pension? They were grateful to their old servants, and intended to show their gratitude in proper fashion. But through no fault of their own their business had been reduced by the enormous taxation upon alkali in America, and he regretted most bitterly that they could not take on more men, or men past their best in life.

Our Book Shelf.

Chemistry in Daily Life. By Dr. Lassar-Cohn. Translated by M. M. P. Muir. Second edition; pp. 336, including index. 21 woodcuts. London: H. Grevel and Co. 1898. 5s.

This work comprises twelve lectures on the chemistry of everyday life. At the time they were delivered and printed they caused no little stir in the neighbourhood of Königsberg University.

Naturally the range of subjects is most extensive; but so much care has been exercised in the arrangement of the lectures that discursiveness has been largely eliminated, and the whole series infused with quite a sense of connectedness. The first three chapters deal with the science of breathing, including air and combustion; flame, with of course, the sources of light; and food, which naturally embraces plant foods (manures), as well as the food of men and animals. These chapters do not depart greatly from the lines usually followed in popular science manuals, but Chapters IV., V., X., and XI. are novel in many ways as helpful to a proper understanding of things as they are entertaining. The paragraphs on the making of soups, bread, and cooking generally, up to (or should we say down to) the brief but pertinent remarks on bimetallism are noteworthy examples of the general excellence of these chapters.

Few people have any idea how closely the science of chemistry is related to everyday phenomena, though a great many have vague and erroneous beliefs thereon. It is not easy to combine a popular exposition of scientific facts with strict accuracy, but the author is to be complimented upon his success in this direction. The book can be understood by any reader of average intelligence, who will carry away accurate impressions of almost all the subjects dealt with.

Qualitative Chemical Analysis (Inorganic). By Chapman Jones; pp. 213, including index. London: Macmillan and Co., Ltd. 1898. 6s.

This work savours strongly of the Department of Science and Art; not that this fact carries with it the unqualified condemnation it used formerly to do, but the statement is rather made because it will convey in a few words the general style and tone of the book. The author aims at furnishing a guide "towards the attainment of systematic work," and he does so, even to the instructions for writing the title of a qualitative analysis, and an example of how to record an analysis on the much-abused, but not wholly worthless, "Exp. Obs. Inf." system.

The analytical tables (which are printed on parchmentised paper) are, generally speaking, good, though we were not surprised to read the author's acknowledgments to Professor Tilden after seeing them. We prefer, however, to have such tables published independently, as tables; and we should advise any student who loves his books to remove the tables and mount them in an album for photographic prints. The arrangement of the book as a whole is refreshing, and although the author endeavours to discount criticism of his method of indicating by an asterisk the portions the student is to verify by experiment, we, however, are disposed to congratulate him upon the idea, as it has enabled him to present the student with a text which is readable, and in which the consecutiveness of the reasoning is not hopelessly marred. It is one thing to read a connected account of the properties and reactions of a metal, and then test the statements experimentally; but it is quite another thing to perform a number of tests which are as isolated as beads, and then try to thread them on a connected line of thought. Most students are not equal to this mental exercise, and Mr. Jones wisely does not ask it of them.

The Chemistry of Gas Manufacture. By W. J. A. Butterfield. Second edition; pp. 448, with index and numerous illustrations. London: Charles Griffin and Co., Ltd. 1898. 10s. 6d.

We are pleased to see that our predictions when reviewing a former edition of this book have been realised, and that a second edition has been found necessary. The excellent quality of the former edition is maintained and brought up-to-date by several additions. The strides which incandescent lighting has made during the last two years, are dealt with at considerable length.

An entirely new chapter of some forty pages is devoted to acetylene, its production and commercial uses. We can fully endorse our former good opinion of the first edition of this book by recommending the present edition to students and others interested or engaged in the gas industries.

Practical Inorganic Chemistry. By C. Jones; pp. 239. 25 Illustrations. London: Macmillan and Co., Ltd. 1898. 2s. 6d.

In tone and construction this book is practically the same as in the author's "Qualitative Chemical Analysis" which we have reviewed above. Of course, this book is confined to the requirements of students who are just passing from the Elementary to the Advanced stage of the Department of Science and Art. It is well printed. In itself it contains little that calls for comment. The best feature is perhaps the questions which are added at the end of the various chapters. By means of them the author endeavours to suggest points of view which are not likely to be discovered by the student; and in many cases the questions cannot fail to teach the student the knack of introspective study.

First Stage Inorganic Chemistry (Practical). By F. Beddow; pp. 163. 36 illustrations. London: W. B. Clive. 1898. 1s.

This book is one of the Organised Science series, published by the University Correspondence College Press. It is well bound, well printed, and the illustrations are clear; to these three virtues must be added that of the popular price of one shilling. At the price the book is one of the best elementary works on practical chemistry a young student can have, which statement, of course, does not preclude the possibility of it being worth the student's while to invest in a higher priced work. Bearing in mind the source of origin, it is not surprising to note that the book is primarily designed as a "silent coach" for examination purposes. It has several features, however, which lift it out of the ranks of the ordinary cram book.

It embraces a little quantitative and volumetric work, the chapters on which, when taken in conjunction with the second chapter, constitute the best portions of the book from an educational point of view.

All the work is arranged in a series of experiments, the descriptions of which are a little lax at times. Why a gun-barrel is expressly mentioned where a short length of iron gas-piping would do as well, it is difficult to explain, especially as the student is frequently told to "be exact in carrying out the directions given."

Kalender für Electrochemiker. By Dr. Neuburger; pp. 464, with supplement of 392 pp. Illustrated. Berlin: M. Krayn. 1899. M. 5.

This combined diary and work of reference is one of the best for electro-chemists, technical chemists, and physicists. This year it contains much new matter, in addition to various tables and mathematical *data*, which have been revised and brought up-to-date. The chemical section contains tables and notes on the specific gravity and percentage composition of solutions; methods for the quantitative electrolysis of metals, technical products, and mineral colours; the resistance and conductivity of about 50 liquid and fused electrolytes, etc. The supplement contains a digest of the patent laws of most countries, and a mass of mathematical constants. There is an excellent table of contents, which is equivalent in detail to an index.

Chemiker-Taschenbuch for 1899; pp. 190. Berlin: R. F. Funcke. 1899.

In addition to a list of the members of the Berliner Bezirksvereins Deutsch Chemiker and their addresses, a lot of general information, and a collection of specific gravity, and logarithm tables is provided. There is an abstract of the patent laws of foreign countries, while the rules for inspection of boilers, works, etc., are given *in extenso*. The book is only of general interest to English chemists however.

Metrical Tables. By Sir G. L. Molesworth; pp. 86, 3rd edition. London: E. & F. N. Spon. 1898. 2s.

The name of Molesworth is in itself an all-sufficient guarantee for the accuracy and general utility of these tables. The book is uniform in

size, with the author's "Pocket Book of Engineering Formulæ," but gives a more extensive set of tables than is included in the pocket book. This arrangement is most convenient for binding purposes, while the tables are in a more handy form for those who wish to carry them about separately. Almost every conceivable table for the conversion of English weights and measures into the terms of the metric system are given, and are, moreover, well displayed and excellently printed in clean-faced numerals.

Commercial Organic Analysis. Vol. IV. By A. H. Allen; pp. 579 including index. Illustrated. 2nd edition. London: J. and A. Churchill. 1898. 18s.

There is hardly another work so oft-consulted, and which enjoys such a well-merited popularity among analytical and technical chemists, as that comprised of the four volumes of Mr. Allen's contributions to our knowledge of commercial organic analysis.

The present volume, which has been revised and enlarged, deals with proteids and albuminous principles and affords a treatise on their properties, analysis, and the detection of adulterants.

It would be far too lengthy a task—or rather pleasure—to refer, however briefly, to all the interesting features of this volume, but we have no doubt that the mere mention of the following few items of special interest will incite analysts to a closer examination of the hidden treasures of the work. In connection with proteids, there is a special section on their analytical reactions, and their determination. Under milk there is an account of the method now employed in the Government laboratory (Somerset House) for analysing altered milk, which has been communicated direct by Dr. T. E. Thorpe. The limits of purity suggested by the Society of Public Analysts and the Committee of Referees, and also those proposed by eminent witnesses before the Committee on Food Products Adulteration (1894-96) are discussed in detail, and prove most instructive reading. Considerable attention is also paid to the estimation of boric acid and other modern milk preservers.

Methods for the examination of sausages and meat extracts, and the detection of horseflesh lead up to the consideration of the character and separation of digestion products.

There is an excellent section on hæmoglobin and its allies, with a special reference to the chemico-legal detection of blood stains. The latter portion of the book deals with the valuation of gelatin, glues, weighted silks, and hair dyes.

On each and every of these highly divergent materials and subjects, medical men, as well as analytical chemists, will find sections that cannot fail to educate, and will generally prove of direct assistance.

History of Chemistry. By E. von Meyer. Translated by G. McGowan. 2nd edition; pp. 631, including index. London: Macmillan and Co., Ltd. 1898. 15s.

The history of chemistry has frequently been dealt with disjointedly, and has always proved interesting as well as helpful; but in the revised second edition of Professor Meyer's work, with its many additions, we have a most complete and excellent history of the growth of chemistry from the time of Aristotle up to the present.

The work is divided into six chapters, the first of which relates the birth of alchemy, the forebear of our present science, and traces its influence upon the ancient arts and industries, such as dyeing, pharmacy, glass and soap manufacture, and pottery work.

The next chapter naturally treats of the alchemical age. In this chapter a feature of the book is introduced for the first time, and this is the addition of a section on the special history of the period as distinct from the general chronicle of events which occurred in the development of chemical science. The special history deals with the theories and practical knowledge of alchemists, and passes in review their efforts in the last four centuries.

With the third chapter we come to the time of Paracelsus and his school, and gradually progress up to Glauber. This iatro-chemical period was notable for the development of pharmacy, though technical chemistry was not without its advances.

Chapter IV. brings us to the period extending from the inception of the phlogiston theory to that of Lavoisier, though strictly speaking this chapter covers the progress made from the days of Boyle, who was not a follower of the phlogiston theory. This apparent fault in chronology is, however, fully justified by the author in his introduction, and also subsequently in the opening passages of this chapter. This interesting period has been illuminated of late years by the Alembic Club reprints of the researches of Black, Cavendish, Scheele, and others, and is now well focussed by the author's general and special summaries.

From Lavoisier, and his enunciation of the combustion theory, we are carried through Dalton's atomic theory and the work of Davy and Gay-Lussac, to the development of Dalton's germ by Berzelius. In this way the work of Liebig Wöhler, Faraday, Dumas, Wurtz, and Hofmann is traced step by step until we reach the latest developments of Kekulé and Couper, Meyer, Newlands, and their contemporaries. This chapter is of necessity a long one, as it covers one of the most active periods of chemical progress, and with it the general history of this science is concluded, for the sixth and last chapter deals with the special history of the various branches of chemistry during the period just disposed of, which are too lengthy and important to be adequately treated as an addenda to the preceding chapter.

As it is, it occupies about 220 pages and in which it is possible to do justice to all the minor lights that helped to heighten the effulgence of this brilliant period.

Opening with the history of Analytical Chemistry the author passes to the consideration of Inorganic and Organic Chemistry, *i.e.*, the progress of Pure Chemistry; after which follows a sketch of Mineralogical Chemistry during the last century. The development of Agricultural and Physiological Chemistry is traced through its many sections, in which there is frequent evidence of the thoroughness with which the author has executed his difficult task. There is a brief review of the advances made in the heavy chemical industries, after which this masterful work is brought to a conclusion by a short summary of the progress made in chemical instruction and technical literature during the nineteenth century, especially in Germany.

THE EXPORT TRADE OF JAPAN.

THE United States Department of State made a request recently for information regarding the policy which Japan pursues to extend her foreign commerce. This is the answer the Department received from the Consul-General at Yokohama:—The success achieved by Japanese manufacturers and exporters seems to be due in some degree to the cheapness of their goods. Government aid, however, has had a stimulating effect in the extension of their foreign markets. The Government department called the Noshomusho is devoted to the interests of agriculture and commerce. Under this department are bureaux of commerce and industry, forestry, mining, patents, and trade-marks, a geological survey, a fish commission, a commercial museum, experimental farms, and the Paris Exposition committee.

Commerce receives further Governmental aid by the support extended to its merchant marine in the shape of bounties and subsidies. The principal steamship company, known as the Nippon Yusen Kaisha (head office at Tokio), has 76 vessels, with a net registered tonnage of 129,308 tons; 14 vessels have over 3,000 tons net, four vessels over 2,000 tons net, 37 vessels over 1,000 tons net, and 21 vessels under 1,000 tons net. This company receives from the Imperial Government an annual subsidy of 800,000 yen (about £80,000).

The Japanese Empire has no Government agencies in other countries for the exploitation of products, aside from the usual consular efforts for the promotion of trade. The Government has frequently assisted private enterprises, but to what extent is a matter of conjecture.

Technical education is receiving substantial assistance from the Government in the following institutions: Tokio Imperial University, Tokio; Kioto Imperial University, Kioto; Tokio Industrial School, Tokio; Tokio Fine Arts School, Tokio; Sapporo Agricultural School, Sapporo; Artillery and Engineering School, Tokio; Mechanical School, Tokio; Tokio Merchant Marine School, Tokio; Osaka Merchant Marine School, Osaka; Hakodate Merchant Marine School, Hakodate; Tokio Post and Telegraph School, Tokio.

The Government has signally aided the development of foreign trade by bounties and subsidies, and this would seem to be its distinctive policy in this line.

THE CAUSTIC SODA TRADE IN THE STATES.

[SPECIALLY CONTRIBUTED.]

IT is now a long time since Wolff, a foreman from the old Greenbank works, left St. Helens to start making caustic soda on a comparatively small scale in the United States of America. It was prior to 1870 that the attempt was made at South Wilmington, twelve miles from Boston, the work being done in a very crude manner, and all on a par with the industrial chemistry of that day. At this works there were four cylinders for making muriatic acid, and the cylinder saltcake was not roasted, but mixed straightway with oyster shells and soft steam coal, and made into black ash. The black ash was lixiviated and worked on the lines of Gossage's process, which lived for so many years afterwards in the Gerard's Bridge chemical works of St. Helens. The vat liquor was concentrated, the carbonate salts being fished out and left lying up and down the yard as a legacy for the next foreman, whose name was Carey. Carey did not do much good, and so another foreman, named Bradley, was got over from St. Helens, who actually made caustic by boiling the vat liquors with lime (which was imported in barrels) and concentrating and finishing in the usual way. After fusing, the caustic soda was run on to flat plates, broken up, and packed in barrels for sale.

The pecuniary result of the before-mentioned manufacture was good enough at the start to induce several other manufacturers to commence, and a small works at South Boston was opened, but it soon stopped again. The position to-day is very different. Apart from the manufacture of caustic in several minor works to supply a local trade in caustic liquor, there are at least two firms in the States manufacturing caustic soda on an enormous scale. This extension is the outcome of the large increase in the manufacture of ammonia-soda, and the firms are the Solvay Process Company and J. B. Ford. We have it on very good authority that the Solvay Company are making at least 700 tons of high strength caustic per week at their works near New York, their new works near Wyandotte being only at present used for the production of ammonia-soda.

Captain John Batiste Ford, the pioneer of the Michigan Alkali Company, has passed his 87th birthday. He began business in Greenville, Indiana, in 1831, in the saddlery line. From Greenville he moved to New Albany, where in 1870 he built the first plate glass works in America. From New Albany the captain moved to Pennsylvania, where he erected plate glass works at Creighton, and later on at Tarenturn and Ford City.

The works of the Michigan Alkali Company at Wyandotte have been of singularly rapid growth. Built in the first instance to supply the glass works with alkali at the cheapest possible rate, the ammonia-soda works increased in size to such an extent that a new outlet for their products was found absolutely necessary. Bicarbonate of soda (on which there is still a handsome profit) and soda crystals are amongst their latest productions, but the caustic soda manufacture is the most important, and when coupled with cement making (rendered possible by the production of carbonate of lime as a waste product), the industry, we believe, stands on sufficiently safe ground to resist the attacks of the older companies upon it.

June, 1897, saw the first pot of caustic finished at Wyandotte. The plant was put down to do 100 tons per week, but this was exceeded, as the first month produced 500 tons of caustic soda, all of good colour, and testing 77 % of alkali when reckoned by the Liverpool test. The manufacture was going on so easily by the end of August, 1897, that preparations were at once made for increasing the plant, and, by the end of October, the finishing pots had been increased in number to 18. A second large triple-effect vacuum pan was also added. In December the additional plant was started, and was producing about 400 tons per week. By July, 1898, stocks, which had accumulated, were being eased off, and the firm began enlarging the plant again so as to produce a maximum of 700 tons of caustic soda weekly.

During all this development, the price of caustic soda had been dwindling towards a *minimum*; the older companies had become accustomed to believe it their prerogative to be the makers for the world, and so a war of prices was commenced which seems only to have increased the zeal of the Michigan staff to secure lower manufacturing costs. In October, 1898, the company began to bore for natural gas at Rockwood, eight miles from Wyandotte, as, with this source of heat, caustic soda could be made from 2 to 3 dollars per ton cheaper than with slack fuel. With this also was commenced a new works for utilising the waste lime mud from the causticisers, a Portland cement works in fact, and we believe that the combination of processes we have thus described to be superior in every way to the process as carried on in this country.

There is money to be made, however, in the heavy chemical trade yet if the foolish internecine warfare could be stayed, and business carried on in this country in a sensible way. It may be very pretty to endeavour to bring one's weaker neighbour to his knees, but it generally costs the victor a pile of cash, and more often than not, only results in enabling some capitalist to acquire a works for an old song, who can then compete better than ever with his neighbour for what orders may be going. There are many instances of this to be found in the chemical districts, but it is not always wise to wait for a dead man's shoes, especially when they are worn by one who is "wick." It is a policy we do not recommend to our friends.

THE LOSS OF FERTILISING MATERIAL.

IN the the Christmas number of the "Land Magazine," Mr. James Long discussed a question of high importance in reply to the astounding statement which was made by Sir William Crookes in his presidential address to the British Association. When we are told that there is a possibility of a failure of the wheat supply of the world in the near future we are naturally set thinking as to what means can be adopted to provide against such a terrible contingency. Mr. Long has attempted to show in what prodigious quantities the fertilising materials upon which the plants of the farm depend are wasted through the medium of sewage. When we feed the animals of the farm upon the plants we grow and the foods we import, considerable care—although not every care—is taken to prevent waste of the fertilising matter which finds its way into the manure, and it should be remembered that a comparatively small proportion of this matter is utilised by the animal. But in the food of the people, which is of a still more concentrated character, there is a quantity of nitrogen, phosphoric acid, and potash so large that it is almost beyond calculation in figures, and this is almost all wasted owing to the method which is adopted for the maintenance of sanitation and the preservation, as it is believed, of the health of the people. Let us first look at the value of the fertilising properties in certain materials which are employed for agricultura purposes; that is, for the feeding of stock and the manuring of the land. Take only four stock foods, cakes and seeds—inasmuch as it is manifestly impossible to estimate with anything like exactness what proportion of the cereals which we import are consumed by stock—and five varieties of manure—nitrate of soda, guano, phosphatic rocks bones, and unenumerated fertilisers.

Estimating the quantity of nitrogen, phosphoric acid, and potash present in these materials, nearly all of which come from over the sea and the quantities of which are shown by official returns, we find upon the basis of average analysis that we import 144,000,000 lb. of nitrogen, about 220,000,000 lb. of phosphoric acid, and about 50,000,000 lb. of potash.

The money value of these fertilising constituents runs into million of pounds, taking nitrogen at 5d. per lb., which is about its present value, based upon the cost of nitrate of soda. It will be admitted that the fertilising constituents of all these foods and manures find their way on to, if not actually into, the land. A certain proportion present in the stock foods is retained by the animals which consume them, and that proportion is undoubtedly very largely wasted, inasmuch as the animal food which is produced is consumed by man, and what is not retained by him practically finds its way into the sewage and is lost altogether. It is, however, much more difficult to estimate, even approximately, what fertility is wasted in connection with the foods of the people, and Mr. Long has not attempted to calculate either the entire waste or the waste from any large number of foods, limiting himself to nine of the principal varieties of foods, of which two are liquids—milk and beer. Bread, of course, stands first, and the

method adopted in making the calculation under this head has been to estimate upon the basis of average existing analyses the quantity of nitrogen, phosphoric acid, and potash in the flour obtained from six bushels of wheat, which is the average quantity consumed per head of our population per annum, and multiplying the result by the number of people in this country. The figures employed in other cases are based partly upon official data and partly upon estimates made by himself or others. In the case of beer, for example, the official returns show the number of barrels which are brewed. With regard to potatoes, the official returns show the area of land devoted to this crop, and the average estimated yield per acre has been taken. And so on with regard to meat, milk, cheese, eggs, rice, poultry, game, and rabbits. In some cases deductions have had to be made by estimate, in order to allow for what is consumed by stock. The result is that Mr. Long has been able to show that more than 500,000,000 lb. of nitrogen, 150,000,000 lb. of phosphoric acid, and 185,000,000 lb. of potash are wasted through the medium of foods consumed by man.

BLEACH AND CAUSTIC IN JAPAN.

[SPECIALLY CONTRIBUTED.]

SOME few years ago we recorded the building and starting of a chemical works in Japan. The plant was chiefly made in St. Helens, and consisted of a Le Blanc installation for the making of caustic soda, and a Weldon plant for the manufacture of bleaching powder. The bleaching powder industry has made favourable progress, and this article is at present being produced in sufficient quantities to meet the home demands, the manganese employed for the production of the chlorine being found in the interior.

The caustic soda manufacture is still in its infancy. It has suffered somewhat from the low prices ruling in European and American markets. At present only one-third of the total consumption of caustic soda in Japan is manufactured there, the remaining two-thirds being supplied from England. The following figures will show the imports of caustic soda into Japan during the past six years, and the value of the same in English money. The increase in the imports during 1897 was due to the fact that the Osaka Alkali Company stopped the manufacture of caustic owing to their inability to compete with the imported article. The value of caustic soda at the present time is £6. per ton on the basis of 70 per cent. of alkali.

	Quantity.	Value.
1892	2,805 tons	£17,232.
1893	2,927 ,,	19,166
1894	2,703 ,,	20,464
1895	3,424 ,,	23,306
1896	1,389 ,,	8,393
1897	3,892 ,,	22,867

COAL IN OUR COLONIES.

[SPECIALLY CONTRIBUTED.]

FROM statistics just issued for the Colonial and other possessions of the United Kingdom in each year, from 1883 to 1897, it is easy to see how the growth of coal mining has extended all the world over. India in 1897 produced upwards of four millions of tons, valued at a million and a quarter rupees, and this coal is used in many of the native industries. We have had sent us several specimens of Indian coal, and have found the samples, though not of so good a quality as English coal, to be a very serviceable article. New South Wales shows, however, the greatest output, which in 1897 had reached over four and a quarter millions of tons; Canada follows next with an output of three and three quarter millions, having a value of one and a half millions sterling. The output from New Zealand amounted during the same year (1897) to 841,000 tons, valued at £420,000.; while the Cape of Good Hope produced 127,000 tons during 1897, as compared with only 27,677 in 1891.

The returns from Natal have puzzled us not a little. The production in 1891 is put down as 87,774 tons, of a value of £43,887., which has risen to 243,960 tons in 1897, valued at £121,980. The existence of a paying seam of coal in Natal was known to us in 1879, and inducements were held out for a venture there. Again in 1890 we were brought in contact with one of the leading men of the syndicate whilst on a visit to Old Meldrum, and he informed us that one of the syndicate's shafts was then raising 1,000 tons per day, which means somewhere about 300,000 tons per annum, a number which, according to statistics was not reached even by the end of 1897.

British manufacturers have been accustomed to decry the value of foreign coal, but the time has come when they will have to give heed to its production abroad, as such a source of fuel will give a fillip to many an industry that would otherwise languish on account of the prohibitive cost of sea-borne coal.

THE UNITED ALKALI COMPANY'S WORKS IN AMERICA.

[SPECIALLY CONTRIBUTED.]

THERE was some talk in Detroit district during November of 1897, that the English United Alkali Company were about to put down works near Wyandotte, Michigan. It was even rumoured that land had been bought between the two works of the Michigan Alkali Company, and that test wells for brine were being sunk there. Be this as it may, no doubt inquiries were made both near Wyandotte and at Ecorse in the salt region of Michigan, but the company eventually settled down at Bay City, some 140 miles away.

In August of last year our correspondent was informed by the men in charge that caustic was not to be manufactured, as the plant which was to be erected was only for the production of chlorate of potash from muriate of potash by an electrolytic process.

The site secured at Bay City is that of an old salt works. There are five brine wells on the estate, worked in the usual manner by the double tube system. The old salt sheds are being used for storage, the new installation consisting of seven sheds about 340 ft. long and 90 ft. wide, in which are situated the boilers, engine, and decomposing cells. There are five large boilers in the boiler house, estimated to consume over two hundred tons of fuel weekly. The main driving engine and two large dynamos are placed in the shed adjoining, while the next shed or cell room is where the actual decomposition of the solution of muriate of potash will take place. In the cell room there are 672 decomposing cells, and the electrolysed solution will flow into the crystallising shed, which is situated next to the cell room. There are other sheds which will be used for storage; a railway runs between the office and the boiler shed, and another line of rails between the old salt work sheds and the new installation. The old salt sheds are on the river bank. We are told the waters sometimes overflow the banks, but we should imagine the United Alkali Company have well inquired into the risks of inundation. It was stated that the works would be ready for starting by Christmas last, but we have not had any information of a serious drop in American chlorate yet, in consequence of the quantity of electric chlorate turned out from Bay City.

THE CHESHIRE SALT TRADE.—The official salt returns of the Cheshire salt trade during 1898 state that the most distinctive feature in connection with the trade is undoubtedly the unsuccessful attempt to form an association of the whole of the manufacturers to prevent the continual reduction in price. This, in the opinion of many, is to be deplored, considering that combination has worked successfully in many trades in all parts of the world. It is contended that the competition as now conducted can only end in loss and possibly ruin. During 1898 the quantity of white salt shipped reached 559,742 tons, and rock salt 48,178 tons, or a total of 607,920 tons compared with an average of 611,569 tons of white salt and 57,832 tons of rock salt annually during the past decade. Last year showed an improvement over 1897, but was still below the nine previous years. The shipments from Liverpool showed an increase of 23,093 tons on the total shipment of rock and white salt in 1897, whilst Runcorn and the Ship Canal give a decrease of 2,566 tons, and Weston Point a decrease of 3,653 tons. There were increases in 1898 in white salt in eight markets, the largest being the East Indies, Africa, Norway and Sweden, and Australasia, and decreases in ten markets, the principal being British North America, Northern United States, Scotland, South America, and Belgium.

THE HYDRO-PRESS GAS-LIGHT APPARATUS.

THE improvements in the Welsbach incandescent light since we first noticed this revolutionising invention in these columns have been so numerous and epoch-marking that they must now be known in every part of the world where gas is used as an illuminant. Among the many advances which have been made upon the original burners and mantles the makers have lately introduced a gas-lighting system which will be of special interest and service to those who have to consider illuminating from an industrial rather than a domestic view-point.

This new system of gas lighting affords an inexpensive method of

producing an installation of high-power lamps burning with the intensity of the electric arc lamp, where gas and water power are available. As compared with the electric light there are many advantages.

By reference to our illustration it will be seen that A is the connection with the water service. At B there is a tap to regulate the water. The gas inlet is at C, while the gas under pressure passes from D to the burners. The waste water escapes at E into a drain or sink. The apparatus is made by the Welsbach Incandescent Gas Light Co., of York-street, Westminster, London, S.W., in various sizes, ranging in price from £10. to £23. 10s. A No. 6 gives about 3,000 candle-power.

THE losses of the past year in the ranks of chemistry have been very heavy, and it is noteworthy that although many of the chemists who have crossed the bourne were men of high scientific attainments, they were for the most part closely associated with the industrial applications of chemistry. Electricity and metallurgy have also experienced very heavy, if less numerous, losses; for who can fail to appreciate the enormous industrial progress which has accrued from the revolutionising inventions of a man like Sir Henry Bessemer, F.R.S. It is indeed opportune that in following our customary alphabetical classification his name should be the first we have to deal with.

HENRY BESSEMER.

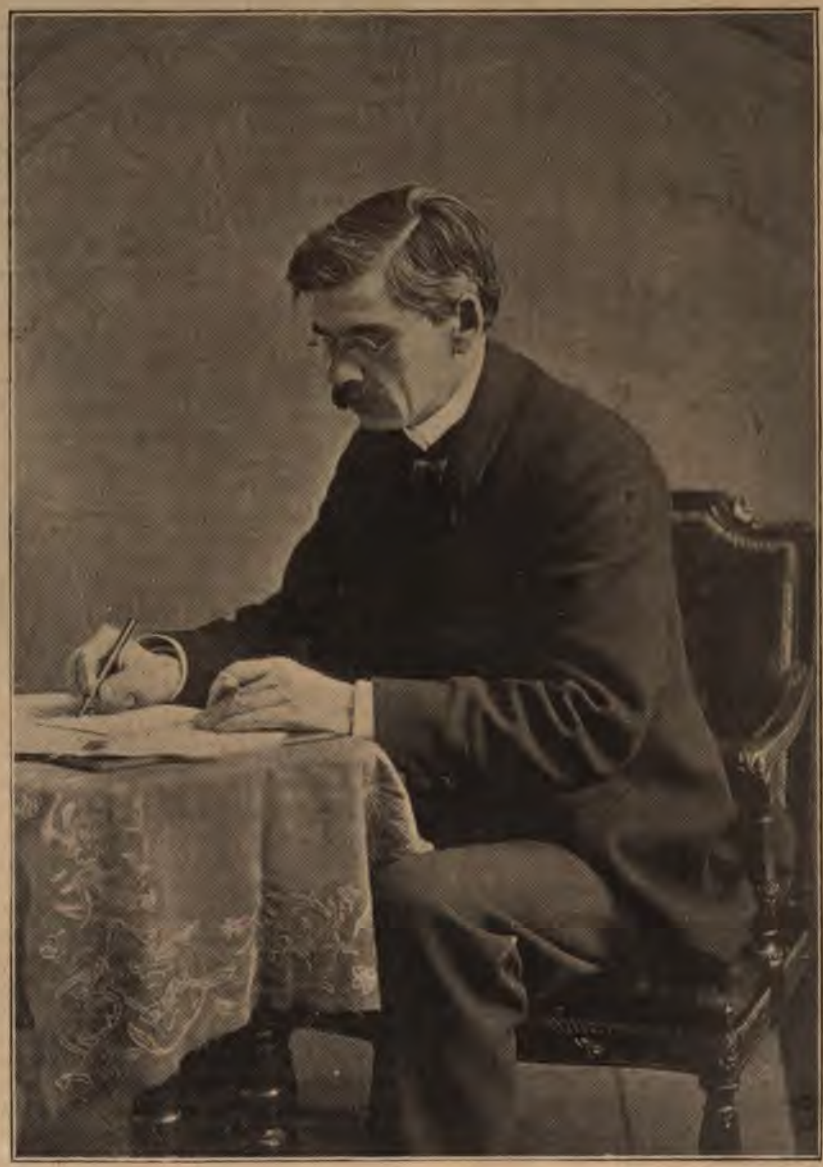
Ætat 85.

Henry Bessemer was born at Charlton, in Herts, where his father, Mr. Anthony Bessemer, had a typefoundry. The father was a man of inventive ability, with mechanical and chemical ingenuity. From these circumstances Bessemer was early habituated to the use of tools. He was as a youth a skilful turner and a dexterous modeller in clay. He went to school at Hitchin, and when only sixteen years of age he left home to seek his fortune in London. He tried several things unsuccessfully, but eventually got employment in furnishing designs for dress fabrics, etc., to a house in St. Paul's Churchyard, on which he was engaged for a time. Later he invented a perforating stamp for the Government Stamp Office, and on the suggestion of Miss Ann Allen, the lady who in 1833 became his wife (and died in 1897), he made the date an integral part of the instrument. The device was adopted, but the promise of lucrative employment in the department was never fulfilled, greatly to the disappointment and indignation of the young inventor.

He then turned his thoughts to other directions, made improvements in typefounding, devised a machine for producing figured Utrecht velvets, and discovered a profitable bronze powder, which was not patented, but used very profitably as a secret process. He made improvements in the manufacture of paints, oils, and varnishes, while his centrifugal pump, his sugar separator, and his plate-glass polishing machine were among the notable exhibits of the Great Exhibition of 1851. He turned his attention to the problem of guns and projectiles, but the plans he submitted to the British War Office were rejected without a trial. Some time later he was on a visit to Lord James Hay at Paris, and there he met at dinner Prince Napoleon. After dinner the conversation turned on artillery, and Bessemer naturally mentioned his plan of firing elongated projectiles from smooth-bore guns. The Prince was struck with the idea, and at once arranged an interview between the inventor and the Emperor, who gave *carte blanche* for experiments at Vincennes. The results were satisfactory, and as Bessemer and the French officers stood by the blazing wood fire in the quarters at Vincennes, a remark was dropped in conversation that turned Bessemer experimenting with the idea of producing a metal resembling mild steel. In due course he produced a metal which was "wonderfully tough for cast iron, but wonderfully brittle if classed as malleable iron." Now Bessemer began to see that if he could succeed the improved metal would not only affect the construction of guns, but have a great commercial value for engineering purposes of almost every kind. Bessemer next showed the results he had obtained to Mr. George Rennie, who urged him to bring the discovery at once before the Cheltenham meeting of the British Association. The paper "On the manufacture of malleable iron without fuel," which was read August 11, 1856, was received with coolness by the scientific world, and not even summarised in the Official Report, but within a month he had received £27,000. for

licences to use the process. Now there came great and unforeseen difficulties. Bessemer had used Blaenavon pig-iron with the result already named, but the manufacturers working under his licences and using various other brands were often unsuccessful. The Bessemer process was formally condemned by the ironmasters of Staffordshire and Worcestershire, and a fiasco seemed inevitable. Bessemer was still convinced that he was in the right, and many costly experiments were made. As the difficulties were chemical rather than mechanical, he fitted up a laboratory and employed a chemical expert. Many paths were tried, only to find that they led nowhere. Six months of constant and expensive experiment had produced no result. There had been a great revulsion of feeling against the Bessemer process, and even his friends counselled him to give up a struggle which they feared could only end in disaster. But in a few more months he had produced from charcoal pig-iron that had cost £7. per ton a steel that was worth from £50. to £60. per ton. Nevertheless, not one single ironmaster in Great Britain was willing to adopt the system. Some steel bars made at his experimental workshop at St. Pancras were introduced into Galloway's foundry at Manchester, and in the two months' trial the workmen were without suspicion that any change had been made or that they were not using metal costing £60. a ton. The result was that the Galloways entered into partnership with Bessemer and others, and works were opened at Sheffield. [The earlier passages of his history in connection with Messrs. Galloway, Ltd., were described in the *Journal* No. 400, p. 44.] The cheaper rate at which they could produce made them formidable competitors, and one by one the ironmasters obtained licences for the working of the Bessemer process. At the end of the fourteen years' term of partnership the works were sold for twenty-four times the amount of the whole subscribed capital of the firm. There was a fine show of the many uses to which the Bessemer steel might be applied at the Great Exhibition of 1862. Soon after Mr. John Platt, M.P. for Oldham, with nine of his friends became interested in the patent rights. They left the control to the inventor, but were to receive a fourth of the royalties. A few years later Bessemer handed them half-yearly a gross sum equal to £260,000.

More fortunate than some great pioneer inventors, Bessemer reaped a full reward for his ingenuity and perseverance. In royalties for the manufacture of steel under his numerous patents he received altogether a sum considerably over a million sterling. He was the recipient of many honours, being created a F.R.S. in 1879. Nothing seemed to come amiss to his capacious brain. If he had not been a great engineer and inventor he would doubtless have been a distinguished member of the Royal Academy. From gold paint to big telescopes; from sugar machinery to steamboats; from fabric designs to the manufacture of steel, his quick intelligence, marvellous industry, and untiring patience ranged, with remarkable results; so that he will always rank amongst the intellectual giants of the century.



FERDINAND HURTER (page 65).

WILLIAM COLCHESTER.

Ætat 85.

Mr. William Colchester, J.P., F.G.S., of Burwell Hall, Cambridgeshire, came of a Gloucestershire family, the deceased being the eldest son of the late Mr. Benjamin Colchester, and spent his early life at Dedham. He was educated at the London University, and in 1840 he married Miss Kate Bright, a daughter of the well-known Maldon family of that name. Mrs. Colchester's decease preceded that of her husband's by some three years. The family surviving are four sons and four daughters, all of whom are well-known in the world of art and letters. Mr. Colchester was intended to follow the profession of an architect, and in early life, before the days of railways, travelled much in Italy, studying architecture by the old masters, and afterwards visiting Russia, mainly for the purpose of studying the manners and language of the Slav races. Returning, however, to the country of his birth, Mr. Colchester became associated with the late Mr. John Chevalier Cobbold in the importation of timber. In the course of time Mr. Colchester became a large shipowner. This led to the development of ship and barge building at the Cliff, Ipswich, which he carried on in conjunction with his other business for many years. In connection

with this same trade, Mr. Colchester was largely engaged in the exportation of rock stone from the sea beds outside Harwich Harbour, round to Babbacombe Bay, Devon, at which place it was imported and utilised in the construction of the Great Western line to Torquay, Exeter, and Plymouth.

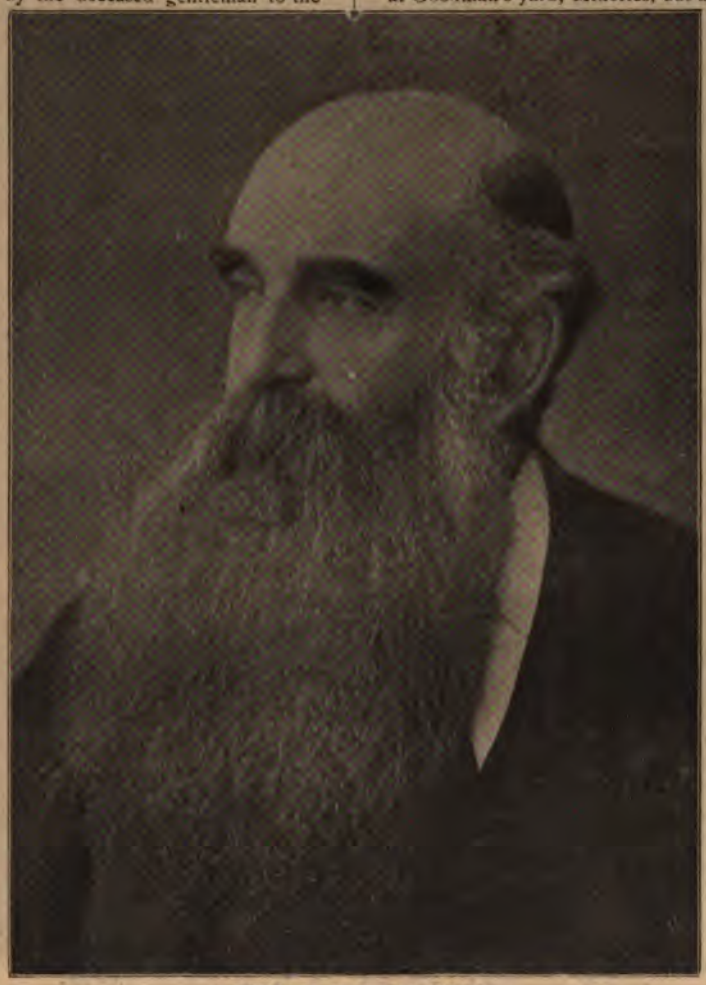
Mr. Colchester's name is, however, known to the world far more familiarly in connection with his discoveries in the field of scientific agriculture. It was, we believe, at Felixstowe and Bawdsey that, in company with Professor Prestwich (a life-long friend), Mr. Colchester himself found the nodules and realised the value that lay within the little yellow pebbles knows as Suffolk coprolites. Many of the most interesting scientific specimens of these coprolites are named in connection with the Colchester family, and a very excellent and historic collection of these was presented by the deceased gentleman to the Ipswich Museum, where they are now to be seen. He had a specimen in the collection he exhibited at the soirée of the British Association in 1895.

After the discovery to which we have referred, Mr. John Bennett Lawes (now Sir J. B. Lawes) was communicated with, and, as one of the founders of the famous firm of Lawes' Chemical Manure Co., Mr. Colchester has been their energetic chairman for many years. He was the first to dig on a large scale the phosphate pebbles from their beds beneath the galt in Cambridgeshire and Suffolk, and the "yellow boys" (as the diggers were called), are still a real memory in the villages between Melton and Bawdsey, and the district around Orford Castle and Sutton Haugh. Mr. Colchester has been able to watch the rise and progress of an industry which unquestionably owes to him a vast amount of its development, and the British farmer of today has much to thank him for.

Works were erected at Ipswich for the crushing and grinding of the raw coprolite, and it was no uncommon thing in those days for frequent special trains to be running, laden with thousands of tons of the newly-discovered mineral. In the experience of the late manager, we are told that sometimes as many as fourteen vessels, steamers and sailing ships, have been waiting their turn to load in the Cliff Bright. Mr. Colchester also acquired large chemical works at Rainham, and at his death was still a proprietor of marshes and land around that place. He was also greatly interested in Langdales Chemical Manure Co. during its early stages.

The Manganese Bronze Company was also a business of his entire creation, he being associated in this undertaking with Mr. Parsons, in conjunction with whom he did much to forward the application of screw propellers to ships.

As a man of intellect he was great, as a man of energy he has had few equals, and, as one of great resourceful tact, his capacity for overcoming difficulties was undoubtedly one of the greatest attributes of his character.



EDWARD RIDER COOK.

EDWARD RIDER COOK.

Ætat 62.

Edward Rider Cook was the eldest son of the late Edward Cook, of Crix, Hatfield Peveril, and of Bow. He was born on the 4th of June, 1836, and was educated at the well-known St. Saviour's Grammar School and the City of London School. He studied chemistry under Professor Graham in the Birkbeck laboratory, where he made his life-long intimate friendship with Professor G Carey Foster, Foster taking the gold medal and first certificate and Cook taking the silver medal and second certificate. He also made friendships, which lasted through life, with Michael Foster, Odling, and many others.

At an early age he abandoned a scientific career to assist his father in business At that time the works were but small, and were carried on at Goodman's-yard, Minories, but afterwards, when serious extensions became necessary, they were removed to Bow, and Edward Rider Cook was taken into partnership in the firm of Edward Cook and Co.

On becoming a soapmaker Cook applied his chemical knowledge to the business, and in the sixties a very considerable amount of laboratory work was done. In 1872 a regular laboratory was established at the works, a proceeding much in advance of the general custom of the trade, which at that time was not noted for its excellence in scientific methods, the chemistry of soap-making being in a very backward condition.

The recovery of glycerine at the works was entered upon very shortly after this, very much at his initiative, and his chemical knowledge and good judgment contributed very largely to its success.

Mr. Cook was a justice of the peace for London, Middlesex, and Essex. He was a member of the Dagenham Sewers Commission, the Metropolitan Board of Works, and for some years was chairman of the River Lee Conservancy Board. In this duty he took the keenest interest, and did much to ameliorate the drainage system of the Lee valley.

As a member of the Metropolitan Board of Works in 1886-87 he directed attention to the more complete purification of the sewage, and by means of laboratory experiments and other details caused the matter to be thoroughly looked into, one of the results being the use on a large scale of manganate of soda in the sewers.

In 1881, when the Society of Chemical Industry was formed Mr Rider Cook was one of the early supporters, and at the inaugural meeting was elected honorary treasurer of the society, a post he continued to fill without intermission until his death. In 1890 he was elected president of the society, and delivered his presidential address at Dublin in 1891. Mr. Cook was appointed in 1891 the representative of the Society of Chemical Industry on the Board of the Imperial Institute, and was re-elected from year to year, the last election taking place in July, 1898.

In writing of Mr. E. Rider Cook, the biographer of the Society o

Chemical Industry says, and we can endorse his remarks to the full :—"Mr. Cook was kindness itself. As a personal friend he has unostentatiously helped many struggling men. He was an ardent and munificent Nonconformist, and a firm believer in religious liberty and equality. In business Mr. Cook carried out the principles which he applied to public affairs. He and his partners built up the East London Soap Works at Bow, until they took a high rank amongst similar industrial concerns. He believed that concern for the labouring element ought not to stop at the platform, and end with an election address. He saw in his workpeople men and women who were helping im to fortune, and decided, as many other employers have done, that, as far as possible, they should share in the prosperity of the concern. So a profit-sharing scheme was formed, and has been working in connection with the firm for a number of years with success. Quite recently Mr. Cook presided over the annual distribution of profits, when all grades of the workers were assembled. In this way the East London Soap Works has attained an enviable reputation, and the happy responsibility rests upon him whose death is genuinely mourned throughout a large and varied circle, including many a humble home."

Mr. E. Rider Cook died at his residence, Woodford House, Woodford Green, on Sunday morning, August 21st, 1898, the immediate cause of death being cerebral hemorrhage. He was 62 years of age at the time of his death.

EUGENE FALK.

Ætat 77.

Mr. Falk, who died at "Catsclough," Northwich, was long and honourably known as the "Father of the Salt Trade."

His association with the salt trade dated from 1841. He founded the Salt Chamber of Commerce in 1858, was instrumental in opening India to the salt trade, and sent the first cargo to Calcutta in 1846. He attended with Cobden at the negotiations of the French Commercial Treaty.

Mr. Falk took an active part in the promotion of the Cheshire Lines and the Birkenhead Railways, and in 1863 he introduced steam on the River Weaver, thus securing the regulation of salt production.

In 1871 he was elected Trustee of the Weaver, and in 1874 he visited India for the purpose of reporting upon all the salt districts in that country. Later, he induced Lord Northbrook to equalise the Indian salt duties.

In 1884 Mr. Falk devised a scheme for the amalgamation of the salt interests; but though it fell through, it was the precursor of the Salt Union.

ALEXANDER FORREST.

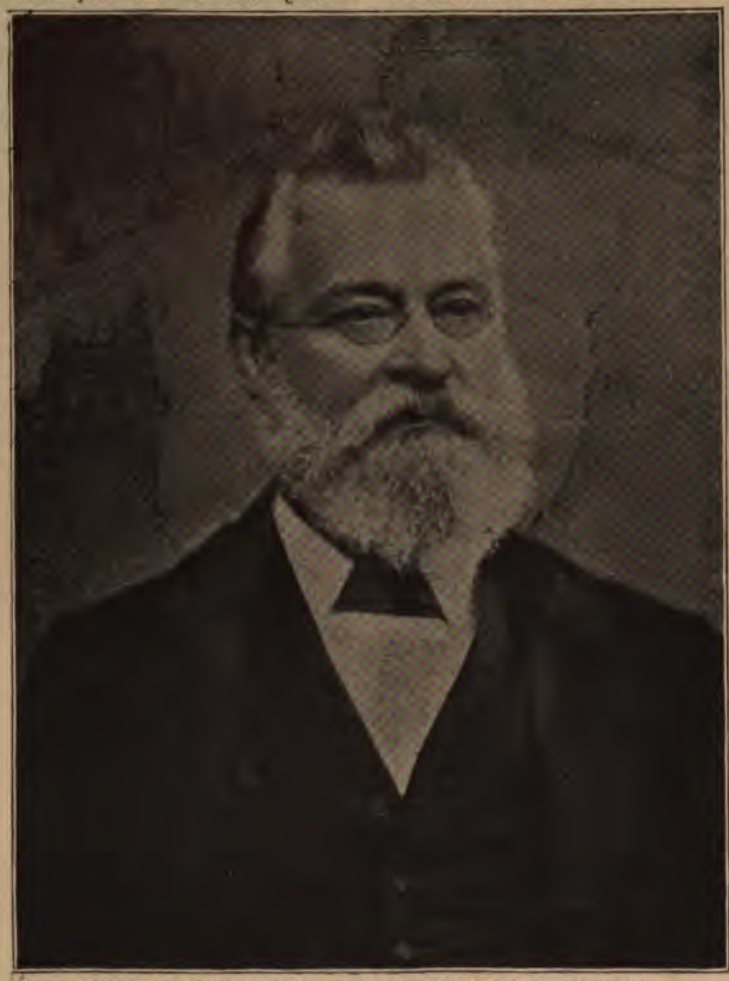
Ætat 60.

Alex. Forrest was born on April 2nd, 1838, his father being a mechanic at the works of Messrs. J. and P. Coats. As the wages of the father were only 25s. a week, and as the mouths of eight other children had to be fed, it may be understood that Alexander Forrest received but slight education in his young days. At twelve, he went to work in the mill where he remained for two years. Then he was bound apprentice to an engineering firm at Glasgow. While so engaged he supplemented the scanty knowledge he had picked up at the day-school by diligent study at a night-school. Leaving Glasgow, he engaged in engineering work in Liverpool and West Hartlepool, and finally he came to Manchester as a fitter.

It may be mentioned, as characteristic of the man, that before settling down in this city he tramped over the greater part of the country, bent on seeing the cathedrals of England. This passion for travel persisted through the greater part of his life.

Before establishing himself in the business which made his fortune in Manchester Mr. Forrest served the Lancashire and Yorkshire Railway Company at the Works at Miles Platting. Then he was engaged as foreman by Messrs. Galloway and Sons at Knot Mill, and in that capacity took part in the construction of the Palatine Bridge, across the Irwell, which at that point connects Manchester and Salford.

In 1864, having put by a small sum of money from his earnings, he, with a partner, began business at Holt Town as an oil distiller under the style of "Smith and Forrest," and in this trade he was engaged to the end of his life. In the neighbourhood in which Mr. Forrest commenced business he began to devote himself to philanthropic work and continued to take an active part in the same up to the time of his death. He was a member of the Lancashire County Council and took a leading part in connection with the Council's work on Railway Rates. He was chairman of the Health Committee and a member of the Technical Instruction and Rivers Mersey and Irwell Committees. From its infancy Mr. Forrest was an active supporter of the Ship Canal scheme.



JOHN ALEXANDER REINA NEWLANDS (page 66).

JOHN HOPKINSON.

Ætat 49.

John Hopkinson, F.R.S., D.Sc., was born at Manchester in 1849. He met with his death while making an ascent of the Dent de Veisivi. His son and two daughters also perished with him.

The rudiments of his education were obtained under Mr. C. Willmore, at Lindow Grove School, and subsequently at Queenwood College. In his sixteenth year he went to Owens College, where he remained for two and a half years, and then went to Trinity College, Cambridge. In 1871 he was senior wrangler and first Smith's prizeman. While at Cambridge he graduated at London University where he took the D.Sc. degree. In 1872, while he was at the university as a member of the college staff, he attracted the notice of Messrs. Chance Bros., the well-known glass and lense manufacturers, of Spon-lane, Birmingham, and it soon became obvious that although so young a man his eminence as a mathematician fitted him admirably for a high and lucrative position in

their service. At that time Messrs. Chance had acquired a great name as the makers of apparatus for lighthouses. Mr. J. Timmins Chance had been engaged in the manufacture of dioptric apparatus, a work of very great delicacy, inasmuch as the glass required to be of the purest quality. After the lenses were cast it was necessary that the surfaces should be ground with exact accuracy to the various angles, and surfaces required by its destined position in the apparatus of the lighthouse, and accordingly the calculations of the angles and curves was the work only of the most skilled mathematician. Prior to this period glass of this character had mostly been made in France. There was no one in England capable of doing it so well as the French; but Mr. Timmins Chance studied the subject, and in the course of time was able to compete with every degree of success with the French makers. When at the close of 1871 Mr. Timmins Chance retired from the practical direction of the business it was not only desirable, but essential, that he should be succeeded by a man of the highest scientific and mathematical ability, and the choice of the firm fell upon Dr. John Hopkinson. In 1878 he left Birmingham and went to London, where he went into practice as an electrical engineer, and was afterwards associated with Messrs. Mather and Platt, of Manchester, in this capacity. His work in connection with dynamos has been very important. In his paper before the Mechanical Engineers in 1879 he first introduced the methods of graphically depicting certain phenomena by means of characteristic curves. The use of these curves has become as common and as useful in dynamo work as indicator curves are in engine work. Dr. Hopkinson's purely scientific work relates principally to electro-statistics and magnetism, on which subjects he has presented several papers to the Royal Society. Papers by Dr. Hopkinson have been read also before the Institution of Civil Engineers, and the Institution of Electrical Engineers. He has published some of the most important of these papers, especially those dealing with "The Specific Inductive Capacity of Bodies," but he is perhaps best known for his researches on dynamo machines and subjects allied thereto.

JOSIAH RIGBY WYLDE (page 67).

FERDINAND HURTER.

Ætat 53.

Ferdinand Hurter, Ph.D., Heidelberg, was born at Schaffhausen on March 15, 1844. Up to the age of 16 he pursued his studies in his native town, after which he went to Winterthur, where he served three years' apprenticeship to a dyer; but, showing capacity and ability, it was decided that his studies should be advanced, and he was subsequently sent to the Polytechnicum at Zurich, and finally to Heidelberg, where he continued his studies under Bunsen and Kirchloff. He graduated at Heidelberg in 1866, and in 1867 he came to England, entering the service of Messrs. Gaskell, Deacon, and Co. as chemist to their alkali works in Widnes. He remained in their employ until the absorption of the firm by the United Alkali Co. in 1890, when he was appointed chief chemist to this latter company, in whose service he remained until his death, which took place on Saturday, March 5th, 1898. He was thus within a few days of being 54 years of age.

Although Dr. Hurter had been in failing health for some time his death came as a great surprise. On the Saturday morning before his decease he was at Widnes as usual, and went in the afternoon to St. George's Hall, Liverpool, to hear Dr. Reace's organ recital. On his return home he partook of his usual tea, and soon after was taken suddenly ill and expired almost immediately from the rupture of a blood vessel internally.

Although of Swiss nationality Dr. Hurter was extremely English in all his associations, and none who knew him thoroughly will fail to hold him in lasting remembrance. He was naturally very highly gifted, his mind being peculiarly inclined to mathematical studies; and, while he was thoroughly alive to all the practical details of his business, his investigations always bore an extremely philosophical aspect. The Journal of the Society of Chemical Industry (of which society he was a vice-president and for a long period hon. foreign secretary) contains his most notable literary productions, and though perhaps time may modify not a few of the conclusions arrived at in them, any one reading them now will be astonished at the pains he took to satisfy himself that he was justified in coming to those conclusions. Dr. Hurter was one of the original members of the Faraday Club and of the Society of Chemical Industry; in the early meetings, which led to the formation of this society, he was one of a small committee appointed to draft bye-laws, and he took the keenest interest in the growth and development of the society. In conjunction with his great friend (Mr. V. Driffield), Dr. Hurter spent a great deal of time in photographic investigations, the Hurter and Driffield actinometer being the outcome of some of them. In January, 1898, their earlier work was recognised by the Royal Photographic Society, who awarded them the "Progress" medal.

Dr. Hurter was closely associated with the late Mr. Henry Deacon in the chlorine process which bears his name, and, though Dr. Hurter was ever too modest a chemist to lay claim to any share of the merits of that process, yet all his friends knew perfectly well who was the originator of the many details which made a crude process into one which was at once practicable and profitable. The great amount of work which the development of this process rendered necessary drew Dr. Hurter into many side paths; but the investigations of all the side issues, when they were described to outsiders in the many communications made from time to time, were always interesting and were always characterised by the ability with which he could impart his knowledge to others. The following are some of the papers contributed by Dr. Hurter to technical industry:—

"On the Time Needed to Effect Chemical Change."

"Dynamic Theory of the Manufacture of Sulphuric Acid." January and March, 1882.

"Prospects of the Manufacture of Chlorine." March, 1883.

"International Standard Methods of Sampling and Testing Commercial Products." November, 1883.

"An Attempt to Utilise Waste Heat by Perkins' Pipes." February, 1884.

"The Comparative Efficiency of Various Modes of Treating Liquids with Gases." November, 1885.

"On Heisch and Folkard's Pyrometer." Dec. 1886.

"On Hermite's Electrolytic Process for the Manufacture of Bleaching Liquor." May, 1887.

"Comparative Efficiency of Various Modes of Treating Liquids with Gases." November, 1887.

"Chairman's Address to the Liverpool Section of the Society of Chemical Industry." November, 1888.

"The Condensation of Hydrochloric Acid Gas." November, 1889.

"An Instrument for the Measurement of Diffused Daylight and the Actinograph." April, 1890.

"Photo-Chemical Investigations and a New Method of Determination of the Sensitiveness of Photographic Plates" (with Driffield). May, 1890.

"The Sector and Grease-spot Photometers and their Results." January, February, and April, 1891.

"The Relation Between Photographic Negatives and their Positives." February, 1891.

"Coke Towers and Similar Apparatus" March, 1893.

"The Comparative Efficiency of Absorbing Apparatus." December, 1893.

"Notes on the Efficiency of Electrolytic Apparatus." May, 1895.

VIVIAN DERING MAJENDIE.

Ætat 62.

Colonel Sir Vivian Dering Majendie died suddenly at Oxford, whither he had gone on a visit to his sister. He attended evening service at St. Philip and St. James's Church, and, being seized with illness, was removed to the vicarage, where he expired within a short time from failure of the heart's action. Born in 1836, he was the son of Major J. R. Majendie, of Pipe Grange, near Lichfield. He was educated at Leamington College, and, passing through the Royal Military Academy, entered the Royal Artillery in 1854, becoming captain in 1861, major in 1872, and lieutenant-colonel in 1881. He took part in the Crimean campaign of 1855. He also served with distinction in the Indian Mutiny, and was present at the capture of Lucknow. In 1871 he was given the appointment of Chief Inspector of Explosives to the Home Office, which he held ever since. In that capacity he was responsible not only for the periodical inspection of the various gunpowder and kindred manufactories scattered throughout the country and for the investigation of the circumstances attending the accidents that occur in them from time to time, but also had to examine very many of the bombs and infernal machines that fell into the hands of the police or were left for felonious purposes in public places. His experiences in this duty were particularly numerous in the years 1883 and 1884, when he was called upon to act in connection with the series of outrages that included explosives at the Local Government Board Offices on the Underground Railway, and at Victoria Station. The abortive attempts to blow up Charing Cross, Paddington, and Ludgate Hill railway stations in the latter year cast upon him the delicate task of dissecting several fully-charged infernal machines, which had only failed to explode in one case because the clockwork had prematurely stopped, and in another because the trigger of the pistol that formed part of the mechanism luckily missed the detonating material by a hair's breath. In his official position he was also concerned with drawing up regulations for the storage of inflammable liquids such as petroleum, and it is not very long since he returned from a tour in America undertaken to study the methods of storage and transport in operation there. He was the author of the Official Guide-book to the Explosives Acts of 1875. He married, in 1863, Adelaide Frances, daughter of the Rev. H. Grylls, who predeceased him.

JOHN METHVEN.

Ætat 53.

John Methven, M. Inst. C.E., was the engineer of the Beckton works of The Gaslight and Coke Company.

The name of Methven has long been associated with gas engineering; and it is not too much to say that the holders of this name have left their impress upon the methods and practice of gas manufacture and supply. His father, Mr. David Methven, was the engineer of the St. Pancras works of the old Imperial Gas Company, and the lessee of the Portsea Island Gasworks; and he was numbered among the leaders of the profession of that time. After serving an apprenticeship with the engineering firm of Walter Mabon and Co., of Manchester, Mr. John Methven continued his training under the guiding hand of his father at St. Pancras.

His first appointment was as assistant at the Bankside works of the then Phœnix Gas Company; and a few years later he was filling the position of secretary and engineer of the Redhill Gas Company. His next engagement was as engineer of the Gravesend Gas Company; and 1872 found him serving as an assistant engineer at the Windsor-street gasworks, Birmingham, while they were still under company control. But his stay in Birmingham was of brief duration, for the following year he went to the Nine Elms works of the London Gas Company, as assistant to Mr. Robert Morton, the engineer, in place of Mr. Charles Hunt, who had been selected to take charge of the Birmingham works. In that capacity, Mr. Methven continued until the amalgamation of the London Company with The Gaslight and Coke Company in 1883, when, consequent on the retirement of Mr. Morton, the directors were able to show their confidence in Mr. Methven by promoting him to the superior position. The trust which was reposed in him was not misplaced; and the directors in 1891 gave evidence of their appreciation of his work by entrusting to him the supreme control of the huge works at Beckton, on the resignation of Mr. Frederick Beale.

In 1878 he introduced, in a paper read before the British Association of Gas Managers, the instrument which has since been known as the "Methven screen." Both in regard to its original and improved form, this system of measuring light has been the centre of much controversy. Mr. Methven's connection with associations identified with the profession dates from 1870, in which year he was elected a member of the British Association of Gas Managers; and he remained with it during its life under that title until 1889 under its new appellation of The Gas Institute. He did not, so far as we remember, occupy any official position in that body; but during his membership he contributed two very important papers. Although an able debater, his name does not frequently figure in the discussions at the meetings. On his withdrawal from the Institute, he became a member of the then newly founded Institution of Gas Engineers, of which body he was President in 1893. Such in brief is the general account of the public side of his life; but the full value of his work in connection with The Gaslight and Coke Company only those in authority could appreciate. That it was great is amply demonstrated by the unhesitating confidence the directors reposed in him.

He was a busy worker and a deep thinker, who was respected among his brother gas engineers not only for the honourable position which he held, but also for the independence of opinion which he always displayed.

JOHN ALEXANDER REINA NEWLANDS.

Ætat 60.

An earnest chemist of a genial and most enthusiastic nature has passed away from our midst in the personality of John A. Reina Newlands.

He was the son of a Glasgow clergyman, with Italian blood on his mother's side, which no doubt infused him with that enthusiasm which caused him to volunteer and serve under Garibaldi in the Italian liberation war.

The ordinary routine of Newland's life was in connection with the chemistry of sugar-refining, but his speculations in theoretical chemistry must not be forgotten in connection with his discovery of the Periodic Law amongst the elements. In these days it is hardly creditable to the Chemical Society of London to have to record how the officials threw cold water over Newlands' ideas, and even went so far as to refuse his paper publication in the journal of that society; and it was not until the year 1887 that justice was done to him by the award of the Davy medal of the Royal Society "for his discovery of the Periodic Law."

It is quite true that Newlands' ideas in this direction were worked out more completely by Mendeleéff, Meyer, and others, but it should be noted that his first paper was laid before the Chemical Society of London in 1863, and three years later he presented another communication on "The Law of Octaves and the Causes of the Numerical Relations Amongst the Atomic Weights."

He died on July 29th, 1898, in the 61st year of his age.

JOHN LYON PLAYFAIR.

Ætat 80.

Lord Playfair was born at Meerut on May 21, 1819, and died on May 29th last year, and had therefore just completed his 79th year. He was the second son of Dr. George Playfair, Chief Inspector-General

of Hospitals in Bengal, and appears to have been sent home in the usual course at an early age to be educated. He studied at St. Andrews, showing an early predilection for chemistry, which presumably led him to Glasgow, where he pursued his studies for some time. At the age of 18 his health broke down, and he returned to India for a time with satisfactory results. We afterwards find him studying chemistry at University College under Graham, from whom he had previously taken lessons at the Andersonian Institution in Glasgow. Then he went to Giessen to learn organic chemistry under Liebig, some of whose works he translated into English. On his return his practical bent asserted itself, and for some years he managed extensive calico printing works at Clitheroe. In 1843 he went to Manchester, where he was appointed Professor of Chemistry at the Royal Institution. His reputation must by this time have been firmly established, since in the following year he was placed by Sir Robert Peel upon a commission charged with an inquiry into the sanitary condition of our large towns. The labours of this commission can hardly have been of the exhaustive character that would be expected nowadays, for it was after their completion and in recognition of his services that Playfair was appointed in 1846 chemist to the Museum of Practical Geology. Two years later he nearly became a colonist, as Faraday procured for the then Mr. Playfair a professorship in Toronto. Playfair had actually packed his trunks and secured his berth when a message arrived from Sir Robert Peel, the Prime Minister, on whose advice and promises he changed his mind and resolved to remain in the old country. The Great Exhibition of 1851 offered a splendid opening for a man of his stamp, and he accordingly became Special Commissioner in charge of the Department of Juries. He had now firmly established himself in the official circles in which he ever afterwards moved. His services were rewarded with the Companionship of the Bath and an appointment in the household of the Prince Consort. In 1856 he became Professor of Chemistry in the University of Edinburgh, where the Prince of Wales and Prince Alfred were among his pupils. This post, which he held until 1869, did not interfere with his activity in other quarters. The second exhibition, in 1862, made a demand upon his services, and he again undertook with fuller powers than before the Department of Juries. He had previously been appointed Inspector-General of Government Museums and Schools of Science. At the French Exhibition of 1878 he was appointed by the Prince of Wales, who was president of the English Commission, to the chairmanship of the finance committee. A scheme for the reorganisation of the Civil Service which bears his name was the outcome of a commission appointed in 1874, of which Playfair was president. He presided over or took part in numerous other inquiries, such as that into cattle plague on its first appearance in this country; that on the fisheries of the Scottish coasts: and that on the suitability of British coals for naval purposes. In fact it may almost be said that for many years no official inquiry into subjects of a practical character was reckoned quite satisfactory without the co-operation of this general official referee. He entered Parliament in 1868, was Postmaster-General in 1873, and was elected a peer in 1892. He produced a great many essays, addresses, and memoirs upon many subjects, but chiefly on education, technical education, sanitation, and economic questions. A selection of these appeared in book form in 1889 under the title of "Subjects of Social Welfare." He was a past president of the Chemical Society of London and of the British Association. He did not disdain the allurements of commerce, and in this connection is perhaps most widely known as chairman of "Bovril" both before and after its reconstruction. He was thrice married.

JOSIAH RIGBY WYLDE.

Ætat 42.

Josiah Rigby Wylde was a native of Runcorn, where his father was a corn miller, and was educated in his native town. After completing his education, he entered, during November, 1874, into the employ of the Widnes Alkali Company, and served his apprenticeship as an analytical chemist. In August, 1877, Wylde married Jane Sarah, the second daughter of the late Mr. George H. Bolton, the principal partner of the Company, and on the death of Mr. Edward Bolton (his brother-in-law), became managing director of the Company, which position he held until the formation of the United Alkali Company, and the transfer of the works to them, in 1890.

Wylde was appointed a managing director of the United Alkali Company soon after its formation, with special charge of the St. Helens district, which then contained eleven alkali and copper works. At that time each works had its own method of working, from the "go as you please" style up to the latest methods. This was a capital field for such a man as Wylde, who was possessed of very remarkable powers of organization, and, thanks to this ability, coupled with his great energy, he soon brought the works into line, and before long had every process worked by the most approved methods, and on uniform and modern lines. So perfectly did he arrange the working that the smallest detail of cost and economy came under his personal observation, and his district was specially noted for improvements and up-to-date methods.

During his connection with the alkali trade, Wylde took out a number of patents, notably in connection with chlorate of potash, the manufacture of which was a special hobby of his. One of these patents was the application of the refrigerating process to chlorate mother liquors, whereby much of the chlorate of potash, which had hitherto been run away, and consequently lost, was saved.

As a manager of workmen, Wylde had no equal. He seemed to have been born for such a post, as he was possessed of untiring energy, and this, united with a strong mind and body, enabled him personally to go into the minutest detail in connection with the manufacture under his control.

With the staff at the various works, he was always on the most friendly terms, and in this way he was able to infuse into them some of his own energy and spirit, and to carry them with him in the development and improvement of the various processes.

In the St. Helens district there is very widespread regret that he was called away in the midst of his labours, and that he was not longer spared to see the work completed which he had so well begun. This, however, is often the way. One man sows, another reaps the harvest. It was only towards the end of September that Wylde was compelled to absent himself from business through an attack of what proved to be Bright's disease, and this, combined with other complications which developed later, caused his death on the 28th November, at the early age of 42.

The funeral, which took place at Penketh cemetery on December 1, 1898, was attended by the directors and general staff of the United Alkali Company, by a large number of the employés from the different works, and many prominent business men testified to the general esteem in which the deceased gentleman was held in the neighbourhood.

MECHANICAL STOKING.

THE desire seems now in every manufacturing industry to reduce actual manual labour to a minimum. Steam power being the main substitute for human labour, it is only natural that the steam boiler should receive the first share of attention, and all that can be done by means of labour-saving machinery ought to be, the more especially if any public advantage can be gained by the change.

Leaving economy out of the question for the moment, there is little doubt but that a good system of mechanical stoking is beneficial to the public in preventing to a large extent the formation of soot, and in our large towns this is a point much to be desired, but it must not be thought that getting rid of the visible portion of coal smoke will make the vapours any less deadly to vegetable life. As a matter of fact, coal smoke, only just visible to the eye, from a furnace well tended in the most perfect manner known, is certainly no less injurious to vegetation than that from a carelessly hand-fired furnace, on account of the greater concentration of the sulphurous impurity; or, to put it in other words, owing to the smaller dilution met with in the excess of air present. However, the visible part of smoke is an eyesore, and has been legislated against, and inventors have not been slow to cope with the difficulty.

It is, of course, easy to prevent smoke during the firing of steam boilers by hand if only certain conditions are complied with. A

suitable fuel must be employed, and only a certain quantity of it per square foot of grate area be allowed to pass on to the fire-bars. With careful hand-firing, and limiting the amount of fuel burnt to something less than 12 lb. per square foot of grate area per hour—which means about 30 tons per week of 168 hours for each 30 ft × 7 ft. Lancashire boiler—there is no doubt that black smoke can be avoided, provided the withdrawal of steam from the boiler is fairly uniform at all hours of the day. If we carefully examine most of the cases wherein smoke production is rife, we shall find that black smoke is produced by an irregular drain of steam from the boilers, which the fireman attempts to remedy by excessively hard firing directly the drain begins. This is not the real remedy, however, as nothing short of an enlarged producing capacity will ever give satisfactory results. In one works, of which we have special knowledge, it was usual to carry about 50 lbs. pressure in the mains, whilst, when a certain operation requiring a large volume of steam was turned on, the pressure fell to under 10 lbs., and so continued for nearly two hours, during which time the firemen were in the greatest distress and black smoke at the maximum.

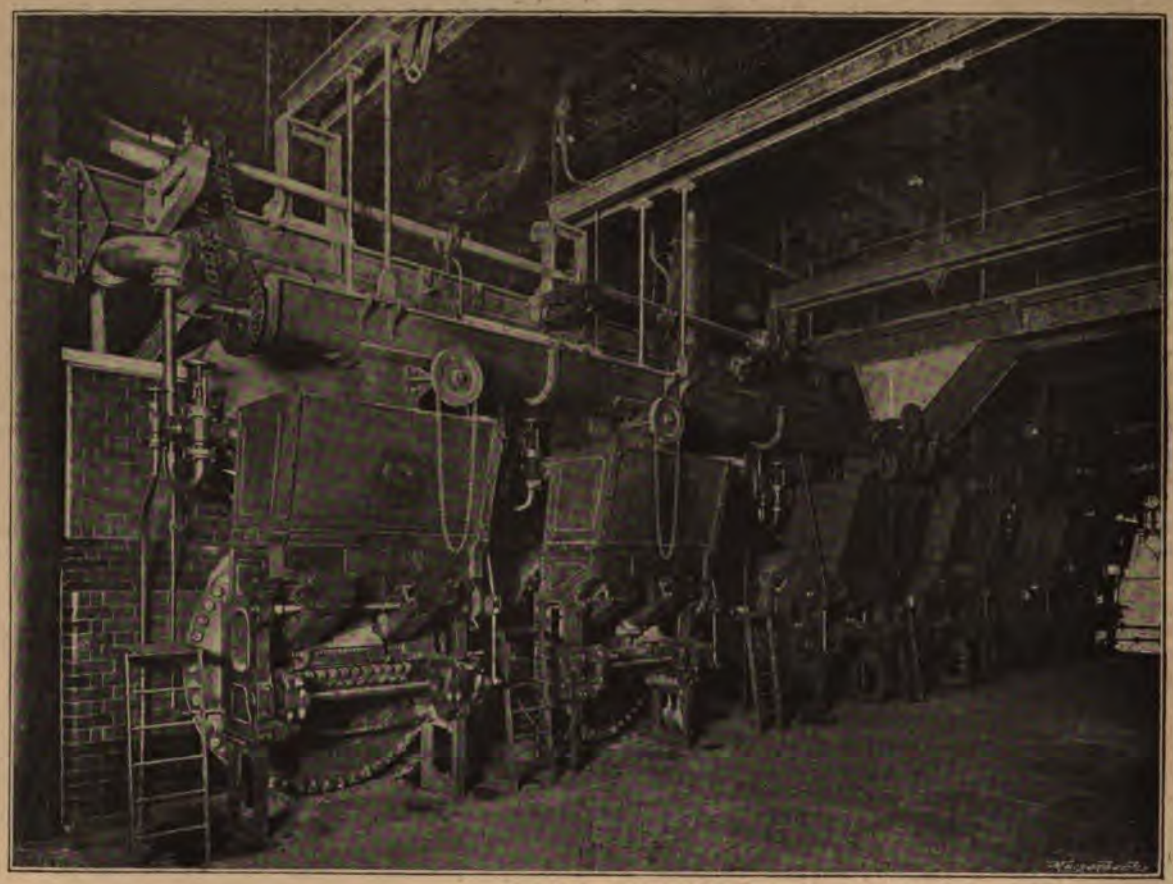
Now, what is the remedy? Plenty of steam room and a mechanical stoker, by means of which the fuel can be put on slowly and continuously, and in due proportion to the draught employed. There may be some steam users who would join issue with us in this *dictum*, but we are prepared to justify our conclusions the first time an opportunity is given us.

There are, of course, several forms of mechanical stokers; but one that has stood the test of time in many varied applications is that of Messrs. T. and T. Vicars, of Earlestown, in Lancashire. In this system of mechanical stoking, the slack is fed automatically into the furnace from a hopper, and two cases or boxes from which it is gradually pushed by reciprocating plungers into the fireplace, when it falls on to the firebars, and these by a slow, reciprocating movement carry the burning mass gradually backwards.

The travel of the bars can be regulated with great nicety from a state of rest to a maximum of 4 inches. The alternate firebars are lowered and drawn towards the front of the furnace, and then all the firebars travel inward together. The motion is derived from a driving shaft, on each end of which an eccentric is fixed, working a ratchet wheel and pawl, by which a transverse shaft at the front is caused to revolve. By means of cams on this shaft the horizontal movements of the firebars are effected. The speed of this motion can be regulated from 30 to 120 turns of the shaft per hour, and the furnace can be fed by hand when required through a doorway situated between the two pushing rams.

A good modern example of this form of mechanical stoker is shown in the accompanying illustration, which represents an installation at the works of the London Hydraulic Power Co., in City-road, and shows how little the coal need be handled from the time it is received into the works from the collieries.

With the Vicars' Stoker it is possible to burn from 17 lb. to 20 lb. of slack per square foot of fire-grate area per hour without producing smoke, with a water evaporation of 10 lb. per lb. of fuel. How often do we find this figure reached in ordinary practice? Not often, and the reason of this should be more eagerly inquired into by steam raisers. With hand firing it is not always easy to regulate the air supply in a perfectly satisfactory manner, but with mechanical stoking the excess of air needed can be considerably reduced owing to the regularity with which the coal can be introduced into the furnace.



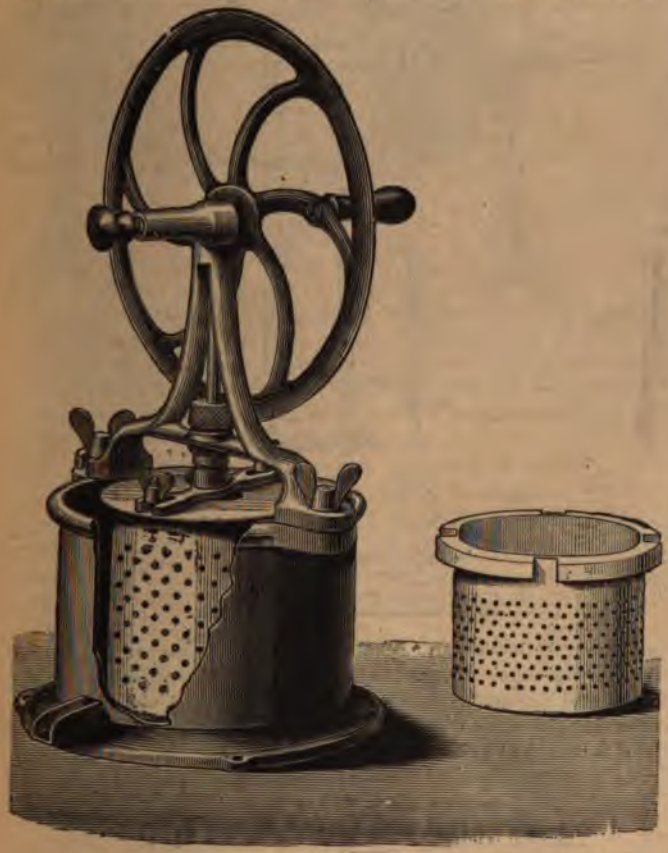
Leesing's Carbon Bricks.—Messrs. Krupka and Jacoby, of 61/62, Watling-street, Queen Victoria-street, London, E.C., are now supplying carbon bricks made of Dr. Leesing's hard-quality carbon. These bricks are now being used extensively on the Continent for lining furnaces, instead of fire-clay bricks, the substitution having proved a great success. Messrs. Krupka and Jacoby are prepared to submit these carbon bricks free of charge to those who are interested.

Laboratory Hints & Chemical Plant.

A CENTRIFUGAL DRYER.

IN this compilation of hints, and descriptions of chemical apparatus it is not by any means easy to find many new contrivances; but, at the same time, there are many modified and improved forms of apparatus which, though worthy the attention of analysts and technical chemists, are frequently buried in a catalogue of ample proportions, and are never unearthed save by the few who study a catalogue as closely as a time-table.

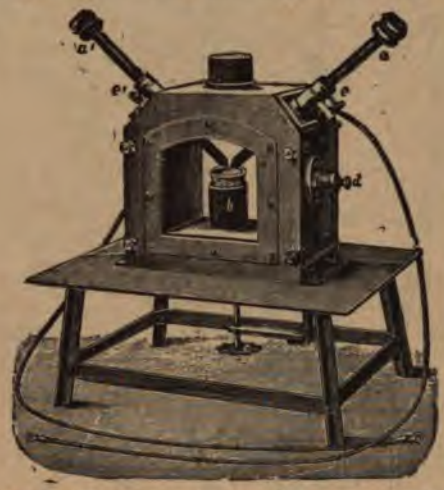
We illustrate first a useful centrifugal, designed by Valsto, for drying crystals and fine chemicals, etc. This apparatus is light, but durable. and is of more than ordinarily simple construction. The buckets and container are of enamelled iron, but a porcelain basket is also shown for use when the mother liquid is acid. By the aid of the wing nuts the



basket can be easily fixed to the whirling plate and the driving gear firmly attached to the container frame. It should be noticed that the axle box has been prolonged into a handle, by gripping which the whole apparatus can be steadied while turning the driving wheel. These centrifugals are also made in another form with the gearing below the basket. They are to be had from Messrs. A. Gallenkamp and Co., 19, Sun-street, Finsbury, London, E.C., and cost about £4.

A LABORATORY ELECTRIC FURNACE.

With the extension of electro-chemical work electric furnaces are daily becoming a necessary adjunct of the technical laboratory. The furnace we illustrate is designed for intermittent and experimental work in the preparation of carbides and reduction of refractory oxides. The crucible is made of carbon or Sinter-magnesite, according to the nature of the work in hand, and sits upon a fire-proof block *b*, which can be raised or lowered by the adjusting screw *c* which is beneath the stand. The furnace body is of iron with a stout clay lining. The front and back of the furnace are closed with stout mica plates, so that by protecting the eyes with suitable spectacles the whole of the operation can be observed from start to finish. The two carbon electrodes have wooden insulated handles, so that they can be adjusted at will, and the arc regulated accordingly. By the aid of a powerful magnet the arc can be deflected in any direction. It will be seen that the connections with the electrodes are permanent, and the temporary connections with the dynamo can easily be made by the terminals on the leading in wires. The cost is £7. 9s. 6d. Another form of furnace for continuous work,

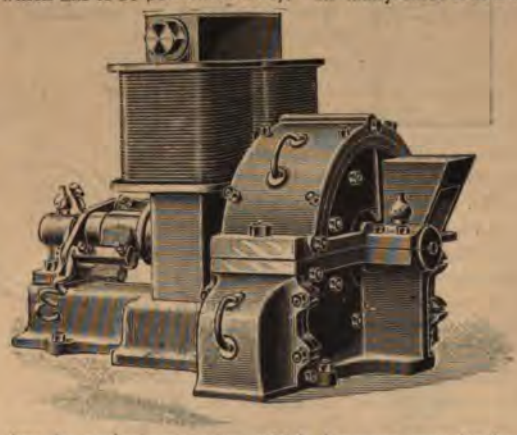


fitted with a feed hopper, and adapted for currents of 100 to 300 ampères, is also made. In this alternate form of furnace powdered materials can be continually supplied in small quantities to the region of the arc, the length of which can be regulated with precision. When the crucible is of carbon it is used as the negative electrode, thus dispensing with one carbon pencil and leaving the interior of the crucible free and open. In the continuous furnace the gases evolved can also be collected. Both types are supplied by Messrs. A. Gallenkamp and Co., whose address is given in the previous article.

AN ELECTRIC DISINTEGRATOR.

In most laboratories, at all events modern technical laboratories, there is a supply of electricity available for power purposes.

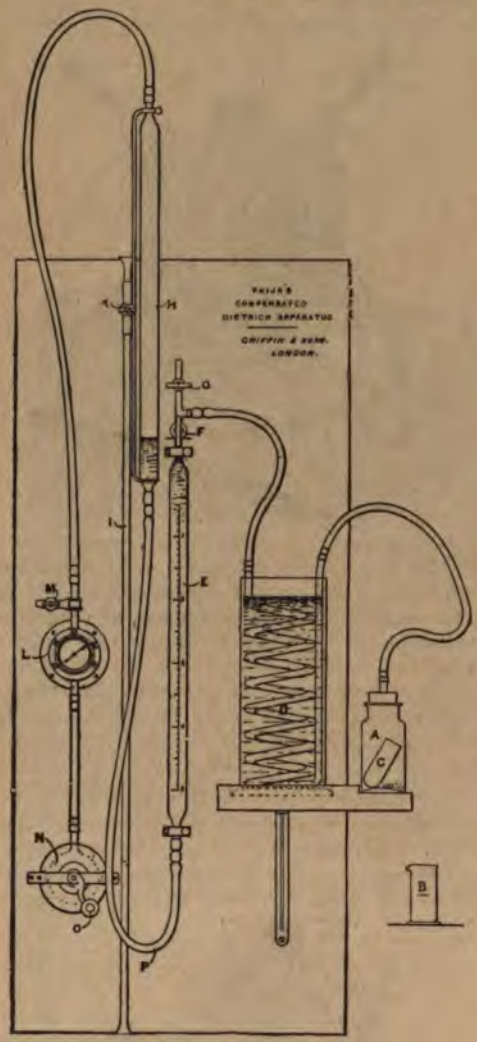
Moreover, the quick reduction of samples to a state of fine division is a task which has to be performed daily. In many cases it is a tedious,



tiring, time-destroying occupation, which, however, must be thoroughly executed, as frequently the success of the subsequent analytical operations depends largely upon the satisfactory grinding of the sample to be weighed off. A small but most efficacious disintegrator is made by Messrs. Christy and Norris, Broomfield-road Ironworks, Chelmsford. It stands about 5 inches high, and has a baseplate of about 4in. by 3in. As soon as the current terminals are attached the motor operates, and in a few seconds the beaters are revolving at something like 5,000 revolutions per minute at the maximum. There are three speeds controlled with the greatest ease by a handy little switch. Very small samples can be ground, and the whole apparatus cleaned in a minute or two.

CEMENT TESTING APPARATUS.

The chemistry of cement making has now been reduced to something like law and order, and it is generally admitted that to make uniformly good Portland cement it is absolutely necessary to test the slip for calcium carbonate several times a day. The Dietrich apparatus is well known now for this purpose, and we illustrate herewith a special

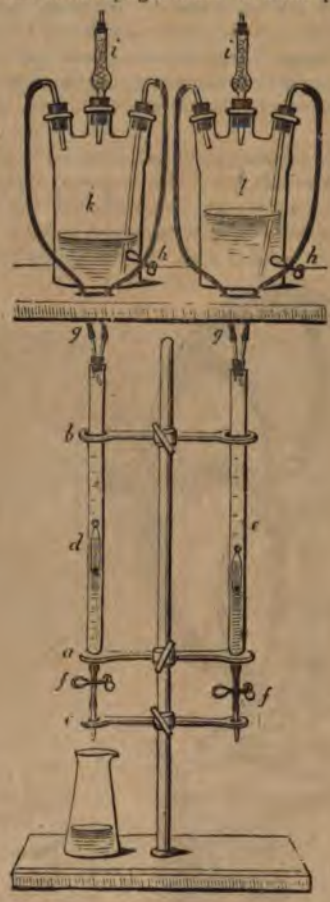


modification of this apparatus, designed by Mr. H. Faija, so as to obviate the use of voluminous tables. Mr. Faija's name is sufficient guarantee for the practicability of this tester; but there is no harm in adding that the details of construction not only have been carefully worked out so as to render the manipulation speedy and simple, but the apparatus has so been arranged as to be always ready for use.

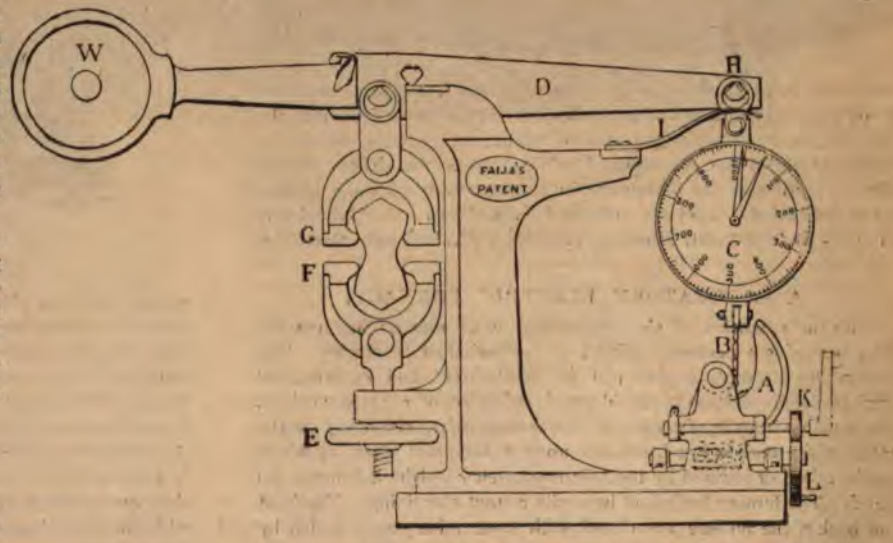
We likewise illustrate Mr. Faija's cement briquette tester, which is adapted for testing briquettes of one square inch section from 1lb. to 1,000lb. It is 13in. by 3in. by 14ins. high, and weighs less than 30lb. A machine testing to one ton is also made, both being supplied by Messrs. J. Griffin and Sons, Ltd., 20, Sardinia-street, London, W.C.

CONTINUOUS FEED BURETTES.

This method of arrangement is very handy, as only ordinary forms of apparatus are required. The Woulff's bottles and empty burette space are charged primarily with air free from carbon dioxide or other innocuous gas, after which the incoming air is purified perpetually. By opening the stopcock *h* the burette is charged, the air merely circulating. For technical purposes this is a very handy and trustworthy contrivance. By bracketting the shelf to the upright it can be made portable; while, if

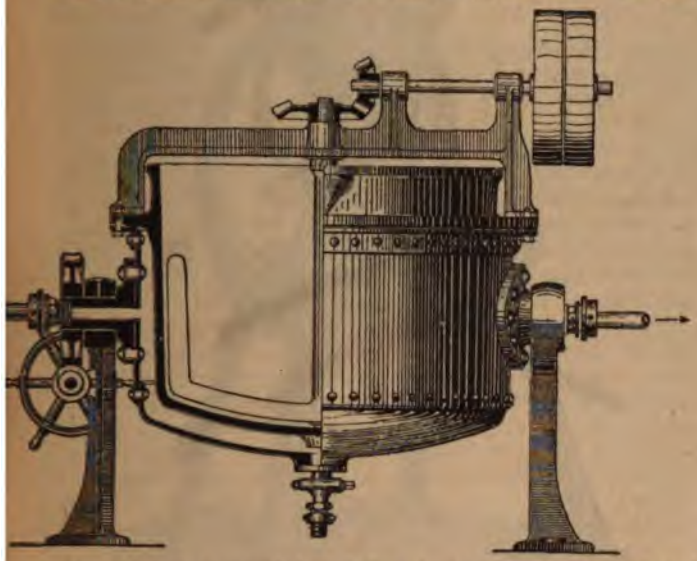


necessary, the bottles can be enclosed in a light lock-up casing, so that the standard solutions cannot be tampered with without the knowledge of the work's chemist. With a circular weighted base-plate and a circular shelf five or six reagents can be accommodated. When a lock-up hood is used the pinch-cock *h* is placed below the shelf. This apparatus is also supplied by Messrs. J. Griffin and Sons, Ltd., London.



A STEAM-JACKETTED MIXING PAN.

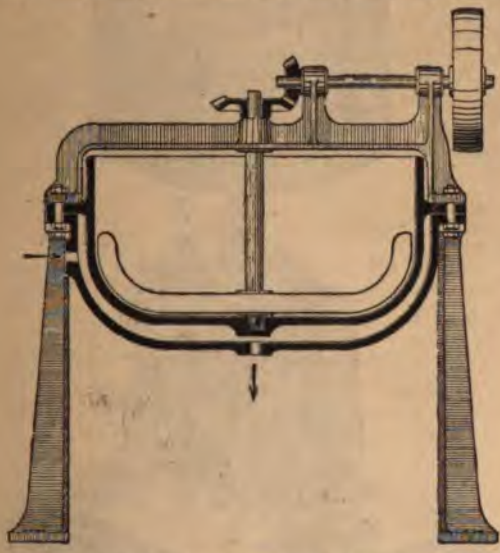
In the preparation of polishing compositions, enamel bases, and the blending of oils and greases, the combined agencies of heat and agitation are frequently in request for manufacturing purposes. In the accompanying figure we illustrate a form which is very suitable for many purposes of this nature. The mixer is power-driven. The pan,



which is open, is mounted on hollow trunnions and steam-jacketted The steam enters through one trunnion, passes round the sides of the pan, and escapes through the opposite trunnion. There is also a draw-off cock for the condensed water. As will be seen, the hand wheel on the left operates a spur wheel keyed to the trunnion, so that the pan may be tilted to discharge the contents.

A LABORATORY MIXING PAN.

Below we illustrate a smaller make of pan, more suitable for use in technical laboratories. It is steam jacketted and provided with agitating arms. There is an inlet and outlet for the steam or other heating iquid, but, unlike the pan referred to in the above paragraph, it cannot



be tilted, as it is bolted to the supporting standards. If desired, the agitator can be operated by hand, when the pulley acts as a fly-wheel and imparts steadiness of motion. This pan, together with the one we have just described, is made by Herren Gebr. Bolze, of Mannheim, for whom Mr. C. Harzer, of 79½, Gracechurch-street, London, is the sole United Kingdom agent.

A FEHLING'S TEST APPARATUS.

The necessity of conducting the Fehling test for sugar in urine, &c., in a warm solution, has evoked the handy contrivance which we illustrate. It has been designed by Professor J. Allen, of Mason College, Birmingham, and is also suitable for the estimation of the phosphates.

The burette support is neat and simple, and commends itself to students as an example of ingenuity in the construction of apparatus. The Bunsen can be swung in or out of place. The only suggestion we would make is the addition of a rose-burner.

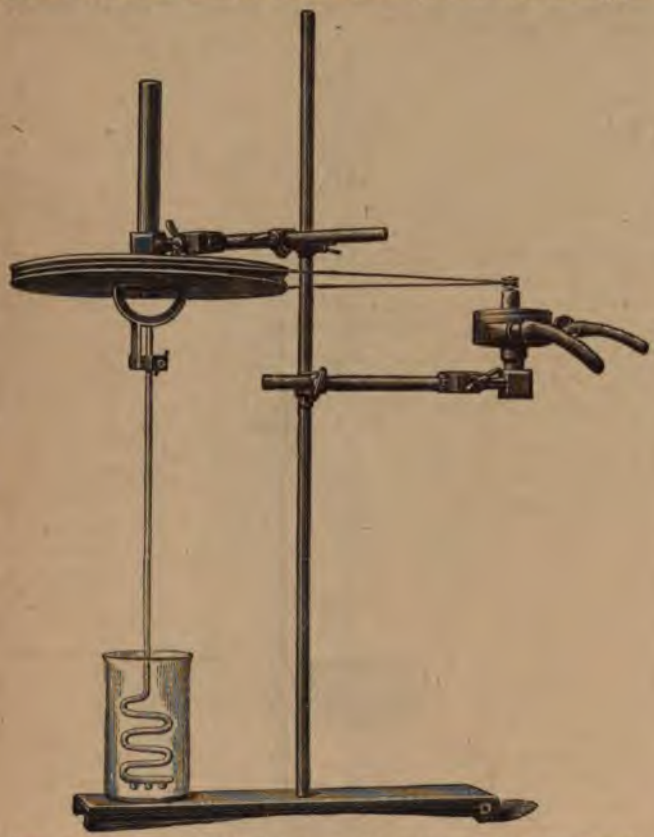
ESMARCH'S COLONY COUNTER.

Counters for use with plate cultures are numerous, and moreover obviously simple in construction, but the following cut shows an ingenious counter for tube cultures. The tube is held in a clip by the

aid of the wing nut, while in the clip frame a sheath is fixed, which is perforated with squares of varying area. The counting is facilitated by the use of an adjustable magnifier. This apparatus and the sugar tester above is supplied by Messrs. Baird & Tatlock, Hatton-garden, London.

A WATER POWER MIXING APPARATUS.

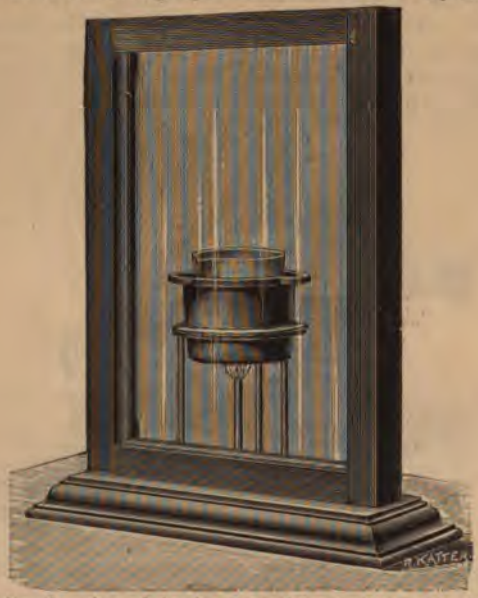
For agitating and mixing liquids this apparatus will be found very useful. The water motor is fixed horizontally, so that the driving gut



does not cross. Any slackness can be taken up by adjusting the clamp. The stirrer is interchangeable, so that by substituting a tin spiral, light solids can be mixed.

GLASS PROTECTION SCREEN.

In the wood cut below we illustrate a new form of plate glass protector for use in conducting experiments and tests on explosives. It



s being largely adopted in the State laboratories on the Continent. The foot is heavily weighted and the glass is very thick. It stands 2 feet high by 16 inches wide.

A CHEMICAL AND DRUG MILL.

This mill is of a somewhat familiar type, but the grinding apparatus is arranged so as to be easily got at and cleaned. The grinding discs

are nearly 5 ins. in diameter. Price £5. Renewal discs 10s. per pair.

AN ELECTRO-MOTOR CENTRIFUGAL.

This form of overhead centrifugal is very handy. By a simple coupling the table can be removed, and milk-tester arms, &c., attached

All the apparatus described on this page is made by Herr E. A. Lentz, 36, Spandauerstrasse, Berlin.

TABLES FOR SUPERPHOSPHATE MANUFACTURERS.

HOW TO FIND THE ACID CONSUMING POWER OF A MINERAL PHOSPHATE.

[ALL RIGHTS RESERVED.]

[SPECIALLY COMPILED AND CONTRIBUTED.]

IT is well known to every maker of superphosphate that mineral phosphates require varying amounts of sulphuric acid to dissolve them, and also that different cargoes of the same kind require different percentages of acid. Phosphates are constantly being put upon the market from fresh localities, new regions are almost daily being ransacked for them, and the result is that the phosphates offered by importers to the superphosphate maker are of widely varying composition. Looking at the results of hundreds of samples examined during the last ten years we find the phosphate varying from 30 to 90 %, the lime from 27 % to between 50 and 60 %, the oxide of iron and alumina from less than 1 % to 8 and 9 %. As the amount of acid saturated varies with each different analysis, it is obviously of importance to the maker of superphosphate to be able, readily, to calculate the amount of acid required from the analysis. As many "super" manufacturers do not employ chemists on their works this calculation has to be performed by themselves, or, where possible, by foremen. It is with a view to economise time and facilitate this calculation that the following four tables have been constructed, namely:—1, Sulphuric Acid 115° Tw. required by Phosphate of Lime [$Ca_3P_2O_8$]; 2, Sulphuric Acid 115° Tw. required by Lime [CaO]; 3, Sulphuric Acid 115° Tw. required by Oxide of Iron [Fe_2O_3]; 4, Sulphuric Acid 115° Tw. required by Alumina [Al_2O_3]; whereby the percentage of acid required by each of these constituents may be read off at once, with a slight exception in the case of Lime, according to the form in which the analysis is stated. The analyses given by merchants are usually stated in the form shown under A.

A		B	
Moisture	1·10	Moisture	1·10
Organic Matter	2·25	Organic Matter	2·25
*Phosphoric Acid	33·80	Phosphate of Lime	73·80
Lime	49·11	Lime (other than Phosphate)	9·11
Oxide of Iron	2·40	Oxide of Iron	2·40
Alumina	·78	Alumina	·78
Magnesia, Alkalies, &c.	8·96	Magnesia, Alkalies, &c.	8·96
Insoluble Silicious Matter	1·60	Insoluble Silicious Matter	1·60
	100·00		100·00

*Equal to Tribasic Phosphate of Lime 73·80 %.

This renders it necessary to make two simple subtractions in order to find the percentage of lime other than phosphate before we can read off the percentage of acid required by lime in the table. Thus, in the above analysis A, we subtract the % Phosphoric Acid (33·80) from the % Phosphate of Lime (73·80); this leaves 40·0 %, which is the lime combined with Phosphoric Acid. Subtracting this 40·0 % again from the total % lime (49·11) leaves us 9·11 % as the percentage of lime, other than as phosphate, which can now be referred to the lime table. Some manufacturers have their results stated in the form set out under B. In this case direct reference to our table can be made.

HOW TO USE THE TABLES.

PHOSPHATE OF LIME:—To find the percentage of acid required take the Phosphate table, look for 73 down the left-hand column, then run the eye horizontally along the line to column ·8, where we see at once that 73·8 % phosphate requires 70·11 % of 115° Tw. acid, Where the analysis runs to the second place of decimals for each ·01 % add ·01 % acid in the case of phosphates.

LIME:—To find the percentage of acid required we will assume that the above subtractions have been made and that we have resulting 9·11 % lime. Looking down the left-hand column of the lime table we find 9·0 %, and opposite this in column headed 0·1 we find 23·93 % acid is required by 9·1 % of lime, and the additional % for the extra 0·01 % is found at the foot of the table to be ·02 %, so that 9·11 % lime requires 23·95 % acid.

OXIDE OF IRON:—To find the percentage of acid required—in this case 2·4 %, find 2 in the left-hand column in the oxide of iron table, and in column ·4 we find 2·21 % acid is required. Had there been a second decimal in the analysis the additional per cent. of acid is shown at the foot of the table.

ALUMINA:—To find acid required look for 7 in the left-hand column, and opposite this in column headed ·8 we find 11·15 % acid is required by 7·8 % alumina. But the analysis shows *one-tenth* of this, viz.: ·78 % of alumina, which will therefore require *one-tenth* of 11·15 or 1·115 % acid.

Lastly, adding these results together, we have:—

For Phosphate of Lime	70·11 %	Acid.
,, Lime	23·95	,,
,, Oxide of Iron	2·21	,,
,, Alumina	1·11	,,
Total	97·38	,,

The phosphate we have selected as an illustration is one from which a large quantity of "super" was made, and it was found to work out very closely to this result in practice. The tables are sufficiently comprehensive to include the wide variations in composition presented by the phosphates on the market. To have carried them out direct to ·01 % would have made them unwieldy.

TABLE I.—SHOWING PERCENTAGE SULPHURIC ACID 115° Tw. REQUIRED BY $Ca_3P_2O_8$.

$Ca_3P_2O_8$ %	0	·1	·2	·3	·4	·5	·6	·7	·8	·9
30	28·50	28·59	28·69	28·78	28·88	28·97	29·07	29·16	29·26	29·35
1	29·45	29·54	28·64	29·73	29·83	29·92	30·02	30·11	30·21	30·30
2	30·40	30·49	30·59	30·68	30·78	30·87	30·97	31·06	31·16	31·25
3	31·35	31·44	31·54	31·63	31·73	31·82	31·92	32·01	32·11	32·20
4	32·30	32·39	32·49	32·58	32·68	32·77	32·87	32·96	33·06	33·15
5	33·25	33·34	33·44	33·53	33·63	33·72	33·82	33·91	34·01	34·10
6	34·20	34·29	34·39	34·48	34·58	34·67	34·77	34·86	34·96	35·05
7	35·15	35·24	35·34	35·43	35·53	35·62	35·72	35·81	35·91	36·00
8	36·10	36·19	36·29	36·38	36·48	36·57	36·67	36·76	36·86	36·95
9	37·05	37·14	37·24	37·33	37·43	37·52	37·62	37·71	37·81	37·90
40	38·00	38·09	38·19	38·28	38·38	38·47	38·57	38·66	38·76	38·85
1	38·95	39·04	39·14	39·23	39·33	39·42	39·52	39·61	39·71	39·80
2	39·90	39·99	40·09	40·18	40·28	40·37	40·47	40·56	40·66	40·75
3	40·85	40·94	41·04	41·13	41·23	41·32	41·42	41·51	41·61	41·70
4	41·80	41·89	41·99	42·08	42·18	42.27	42·37	42·46	42·56	42·65
5	42·75	42·84	42·94	43·03	43·13	43·22	43·32	43·41	43·51	43·60
6	43·70	43·79	43·89	43·98	44·08	44·17	44·27	44·36	44·46	44·55
7	44·65	44·74	44·84	44·93	45·03	45·12	45·22	45·31	45·41	45·50
8	45·60	45·69	45·79	45·88	45·98	46·07	46·17	46·26	46·36	46·45
9	46·55	46·64	46·74	46·83	46·93	47·02	47·12	47·21	47·31	47·40
50	47·50	47·59	47·69	47·78	47·88	47·97	48·07	48·16	48·26	48·35
1	48·45	48·54	48·64	48·73	48·83	48·92	49·02	49·11	49·21	49·30
2	49·40	49·49	49·59	49·68	49·78	49·87	49·97	50·06	50·16	50·25

TABLE I.—SHOWING PERCENTAGE SULPHURIC ACID 115° Tw. REQUIRED BY $Ca_3P_2O_8$—CONTINUED.

$Ca_3P_2O_8$ %	0	·1	·2	·3	·4	·5	·6	·7	·8	·9
53	50·35	50·44	50·54	50·63	50·73	50·82	50·92	51·01	51·11	51·20
4	51·30	51·39	51·49	51·58	51·68	51·77	51·87	51·96	52·06	51·15
5	52·25	52·34	52·44	52·53	52·63	52·72	52·82	52·91	53·01	53·10
6	53·20	53·29	53·39	53·48	53·58	53·67	53·77	53·86	53·96	54·05
7	54·15	54·24	54·34	54·43	54·53	54·62	54·72	54·81	54·91	55·00
8	55·10	55·19	55·29	55·38	55·48	55·57	55·67	55·76	55·86	55·95
9	56·05	56·14	56·24	56·33	56·43	56·52	56·62	56·71	56·81	56·90
60	57·00	57·09	57·19	57·28	57·38	57·47	57·57	57·66	57·76	57·85
1	57·95	58·04	58·14	58·23	58·33	58·42	58·52	58·61	58·71	58·80
2	58·90	58·99	59·09	59·18	59·28	59·37	59·47	59·56	59·66	59·75
3	59·85	59·94	60·04	60·13	60·23	60·32	60·42	60·51	60·61	60·70
4	60·80	60·89	60·99	61·08	61·18	61·27	61·37	61·46	61·56	61·65
5	61·75	61·84	61·94	62·03	62·13	62·22	62·32	62·41	62·51	62·60
6	62·70	62·79	62·89	62·98	63·08	63·17	63·27	63·36	63·46	63·55
7	63·65	63·74	63·84	63·93	64·03	64·12	64·22	64·31	64·41	64·50
8	64·60	64·69	64·79	64·88	64·98	65·07	65·17	65·26	65·36	65·45
9	65·55	65·64	65·74	65·83	65·93	66·02	66·12	66·21	66·31	66·40
70	66·50	66·59	66·69	66·78	66·88	66·97	67·07	67·16	67·26	67·35
1	67·45	67·54	67·64	67·73	67·83	67·92	68·02	68·11	68·21	68·30
2	68·40	68·49	68·59	68·68	68·78	68·87	68·97	69·06	69·16	69·25
3	69·35	69·44	69·54	69·63	69·73	69·82	69·92	70·01	70·11	70·20
4	70·30	70·39	70·49	70·58	70·68	70·77	70·87	70·96	71·06	71·15
5	71·25	71·34	71·44	71·53	71·63	71·72	71·82	71·91	72·01	72·10
6	72·20	72·29	72·39	72·48	72·58	72·67	72·77	72·86	72·96	73·05
7	73·15	73·24	73·34	73·43	73·53	73·62	73·72	73·81	73·91	74·00
8	74·10	74·19	74·29	74·38	74·48	74·57	74·67	74·76	74·86	74·95
9	75·05	75·14	75·24	75·33	75·43	75·52	75·62	75·71	75·81	75·90
80	76·00	76·09	76·19	76·28	76·38	76·47	76·57	76·66	76·76	76·85
1	76·95	77·04	77·14	77·23	77·33	77·42	77·52	77·61	77·71	77·80
2	77·90	77·99	78·09	78·18	78·28	78·37	78·47	78·56	78·66	78·75
3	78·85	78·94	79·04	79·13	79·23	79·32	79·42	79·51	79·61	79·70
4	79·80	79·89	79·99	80·08	80·18	80·27	80·37	80·46	80·56	80·65
5	80·75	80·84	80·94	81·03	81·13	81·22	81·32	81·41	81·51	81·60
6	81·70	81·79	81·89	81·98	82·08	82·17	82·27	82·36	82·46	82·55
7	82·65	82·74	82·84	84·93	83·03	83·12	83·22	83·31	83·41	83·50
8	83·60	83·69	83·79	83·88	83·98	84·07	84·17	84·26	84·36	84·45
9	84·55	84·64	84·74	84·83	84·93	85·02	85·12	85·21	85·31	85·40
90	85·50	85·59	85·69	85·78	85·88	85·97	86·07	86·16	86·26	86·35

TABLE II.—SHOWING PERCENTAGE SULPHURIC ACID 115° Tw. REQUIRED BY LIME (CaO.)

CaO. %	0	·1	·2	·3	·4	·5	·6	·7	·8	·9
0		0·26	0·52	0·79	1·05	1·31	1·58	1·84	2·10	2·36
1	2·63	2·89	3·15	3·42	3·68	3·49	4·21	4·47	4·73	5·00
2	5·26	5·52	5·78	6.05	6·31	6·57	6·84	7·10	7·36	7·63
3	7·89	8·15	8·41	8·68	8·94	9·20	9·47	9·73	9·99	10·26
4	10·52	10·78	11·04	11·31	11·57	11·83	12·10	12·36	12·62	12·89
5	13·15	13·41	13·67	13·94	14·20	14·46	14·73	14·99	15·25	15·52
6	15·78	16·04	16·30	16·57	16·83	17·09	17·36	17·62	17·88	18·15
7	18·41	18·67	18·93	19·20	19·46	19·72	20·00	20·25	20·51	20·78
8	21·04	21·30	21·56	21·83	22·09	22·35	22·62	22·88	23·14	23·41
9	23·67	23·93	24·19	24·46	24·72	24·98	25·25	25·51	25·77	26·04
10	26·30	26·56	26·82	27·09	27·35	27·61	27·88	28·14	28·40	28·66
11	28·93	29·19	29·45	29·72	29·98	30·24	30·51	30·77	31·03	31·30
12	31·56	31·82	32·08	32·35	32·61	32·87	33·14	33·40	33·66	33·93
13	34·19	34·45	34·71	34·98	35·24	35·50	35·77	36·03	36·29	36·56
14	36·82	37·08	37·34	37·61	37·87	38·13	38·40	38·66	38·92	39·19
15	39·45	39·71	39·97	40·24	40·50	40·76	41·03	41·29	41·55	41·81
16	42·08	42·34	42·60	42·87	43·13	43·39	43·66	43·92	44·18	44·45
17	44·71	44·97	45·23	45·50	45·76	46·02	46·29	46·55	46·81	47·08
18	47·34	47·60	47·86	48·13	48·39	48·65	48·92	49·18	49·44	49·71
19	49·97	50·23	50·49	50·76	51·02	51·28	51·55	51·81	52·07	52·34
20	52·60	52·86	53·12	53·39	53·65	53·91	54·18	54·44	54·70	54·97
21	55·23	55·49	55·75	56·02	56·28	56·54	56·81	57·07	57·33	57·60
22	57·86	58·12	58·38	58·65	58·91	59·17	59·44	59·70	59·96	60·22
23	60·49	60·75	61·01	61·28	61·54	61·80	62·07	62·33	62·59	62·86
24	63·12	63·38	63·64	63·91	64·17	64·43	64·70	64·96	65·22	65·49
25	65·75	66·01	66·27	66·54	66·80	67·06	67·33	67·59	67·85	68·12
26	68·38	68.64	68·90	69·17	69·43	69·69	69.96	70·22	70·48	70·75
27	71·01	71·27	71·53	71·80	72·06	72·32	72·59	72·85	73·11	73·38
28	73·64	73·90	74·16	74·43	74·69	74·95	75·22	75·48	75·74	76·01
29	76·27	76·53	76·79	77·06	77·32	77·58	77·85	78·11	78·37	78·64
30	78·90	79·16	79·42	79·68	79·94	80·20	80·46	80·72	80·98	81·24

ADDITIONAL PER CENTS OF ACID FOR SECOND PLACE OF DECIMALS.

%CaO	—	·01	·02	·03	·04	·05	·06	·07	·08	·09
%Acid ...	—	·02	·05	·08	·10	·13	·16	·18	·21	·24

TABLE III.—SHOWING PERCENTAGE SULPHURIC ACID 115° Tw. REQUIRED BY OXIDE OF IRON (Fe_2O_3.)

Fe_2O_3 %	0	·1	·2	·3	·4	·5	·6	·7	·8	·9
0		0·09	0·18	0·27	0·37	0·46	0·55	0·64	0·73	0·83
1	0·92	1·01	1·10	1·19	1·29	1·38	1·47	1·56	1·65	1·75
2	1·84	1·93	2·02	2·11	2·21	2·30	2·39	2·48	2·57	2·67
3	2·76	2·85	2.94	3·03	3·13	3·22	3·31	3·40	3·49	3·59
4	3·68	3·77	3·86	3·95	4·05	4·14	4·23	4·32	4·41	4·51
5	4·60	4·69	4·78	4·87	4·97	5·06	5·15	5·24	5·33	5·43
6	5·52	5·61	5·70	5·79	5·89	5·98	6·07	6·16	6·25	6·35
7	6·44	6·53	6·62	6·71	6·81	6·90	6·99	7·08	7·17	7·27
8	7·36	7·45	7·54	7·63	7·73	7·82	7·91	8·00	8·09	8·19
9	8·28	8·37	8·46	8·55	8·65	8·74	8·83	8·92	9·01	9·11
$\%Fe_2O_3$	—	·01	·02	·03	·04	·05	·06	·07	·08	·09
%Acid	—	·01	·02	·03	·04	·05	·06	·07	·08	·09

TABLE IV.—SHOWING PERCENTAGE SULPHURIC ACID 115° Tw. REQUIRED BY ALUMINA (Al_2O_3.)

Al_2O_3 %	0	·1	·2	·3	·4	·5	·6	·7	·8	·9
		0·14	0·28	0·43	0·57	0·71	0·86	1·00	1·14	1·28
1	1·43	1·57	1·71	1·86	2·00	2·14	2·29	2·43	2·57	2·72
2	2·86	3·00	3·14	3·29	3·43	3·57	3·72	3·86	4·00	4·15
3	4·29	4·43	4·57	4·72	4·86	5·00	5·15	5·29	5·43	5·58
4	5·72	5·86	6·00	6·15	6·29	6·43	6·58	6·72	6·86	7·01
5	7·15	7·29	7·43	7·58	7·72	7·86	8·01	8·15	8·29	8·44
6	8·58	8·72	8·86	9·01	9·15	9·29	9·44	9·58	9·72	9·87
7	10·01	10·15	10·29	10·44	10·58	10·72	10·87	11·01	11·15	11·30
8	11·44	11·58	11·72	11·87	12·01	12·15	12·30	12·44	12·58	12·73
9	12·87	13·01	13·15	13·30	13·44	13·58	13·73	13·87	14·01	14·16
$\%Al_2O_3$	—	·01	·02	·03	·04	·05	·06	·07	·08	·09
%Acid	—	·01	·03	·04	·06	·07	·09	·10	·11	·13

HOW TO MAKE A "DISSOLVING TEST."

It may, in connection with this subject, be of interest to some of our readers if we describe a "dissolving test" in use in a number of works for experimentally determining the amount of acid required by any mineral phosphate to convert it into superphosphate in good condition.

An acid is prepared having a specific gravity of 115° Tw. If the acid used in the works is accurately 115° Tw. at 60° F. it will do. Twenty grammes of this acid are weighed off in a small flask. Ten grammes of the mineral are weighed off and added, little by little, to the twenty grammes of acid with agitation; when the whole has been thoroughly mixed it is set aside at 100° F. (40° C.) for two hours, occasionally stirring. At the end of two hours the mixture is transferred to a 250 cc. flask, filled up to the mark and well shaken. Filter through a dry filter into a dry flask. 25 cc. of this filtrate (= 1 grm. mineral in 2 grms. acid) is titrated with normal sodium hydrate until the faintest cloudiness appears. The exact point is best ascertained by titrating a second, or third, 25 cc. The volume of sodium hydrate used is noted—say 13·8 cc.

Twenty grammes of the acid alone are diluted to 250 cc., well mixed, and 25 cc. titrated with litmus and normal sodium hydrate. The volume of sodium hydrate consumed is noted—say 27·0 cc.

Then 27·0 minus 13·8 = 13·2 cc. and 13·2 × 7·39 = 97·54 % 115° Tw. This factor 7·39 is convenient, but it may be as well to add that 13·2 cc. is the equivalent in normal solution of the acid neutralised by 1 grm of the mineral, each cc being equal to ·04 grm. SO_3, and therefore (as 115° Tw. acid contains 54·13 % SO_3) $\frac{13·2 \times ·04 \times 100}{54·13}$ = 97·54 %, which is the same as with the factor. This test occupies about three hours.

BOILER EXPLOSIONS IN 1898.—The 16th report on the working of the Boiler Explosions Acts during the year ended June 30, 1898, was issued recently in a Parliamentary paper. Mr. Ingram B. Walker, Assistant Secretary (Marine Department) Board of Trade, who has prepared the report, stated that under the provisions of the Acts named 65 preliminary inquiries and 19 formal investigations were held during the year. In the 12 months referred to 84 boiler explosions occurred, and by these 37 persons were killed and 46 injured. Since the Act of 1882 came into operation the average number of persons killed by such explosions yearly has been 29·1, and the average number killed and injured 90 Therefore the number of persons killed last year was above, and the number killed and injured considerably below, the average of the last 16 years. Of the 84 explosions dealt with, 46 occurred on board ship and 38 on land. Of the total number 34 were due to the defective condition of the boiler or its fittings, 27 to defects in the design, etc., and 14 to ignorance or neglect,

MERCURY DURING THE PAST DECADE.—Mr. Alexander S. Pickering, of London, has compiled the following table, showing the imports and exports of quicksilver and the highest and lowest prices in the London market for each of the past nine years:—

	Imports. Bottles.	Exports. Bottles.	Highest. £ s. d.	Lowest. £ s. d.
1898..	54,563	34,014	7 15 0	6 16 0
1897..	54,734	30,768	7 7 6	6 9 6
1896..	47,159	35,211	7 6 0	6 5 6
1895..	49,654	36,827	7 8 6	6 7 6
1894..	51,251	43,598	6 14 0	5 7 0
1893..	52,535	38,022	6 17 0	6 2 0
1892..	56 990	50,211	7 13 0	6 1 0
1891..	62,771	56,643	9 0 0	7 5 0
1890..	59,410	61,465	10 6 6	8 18 0

The estimated consumption in the United Kingdom is 13,000 bottles per annum.

COAL TAR COLOUR MAKING IN GERMANY.

[SPECIALLY CONTRIBUTED.]

IF there is one branch of the chemical industry which has developed more than any other, or which, perhaps has led to greater developments during the past fifty years, it is that of the manufacture of colouring matters or dyes from coal tar, and the raw materials which can be made from that article. Although at its inception an English industry, yet it is now chiefly in the hands of German manufacturing firms, and has received its greatest developments at the hands of German research chemists, who still, year by year, add to the already large number of these dyes known; while their continuous research has resulted, and is yet resulting in the discovery of other substances, which are of value for pharmaceutical, disinfecting, and like purposes.

We purpose here to give a brief sketch of the present condition of this important industry, to point out in what manner it has developed, and the methods used by the various firms in bringing their products before the notice of consumers, as affording an object lesson in the extension of chemical industries.

The German coal tar colour industry is practically concentrated in a few hands and places; we may enumerate the following firms:—The Badische Anilin und Soda Fabrik, at Ludwigshafen am Rhein; Farbwerke vorm Meister, Lucius & Bruning at Hœchst am Main; Farbenfabriken vorm Fr. Bayer & Co., at Elberfeld; Messrs. Leopold Cassella & Co., at Mainhur, near Frankfurt am Main; Actiengesellschaft fur Anilin Fabrikation, of Berlin; Kalle & Co, Biebrich am Rhein; Farbwerk vorm, A. Leonhardt & Co., Muhlheim am Main; K. Oehler, at Offenbach am Main. These are all firms whose names have a world-wide reputation as makers of coal tar colours, and in addition there are a few smaller manufacturers at Barmen, Uerdingen, &c. The capital invested in those firms is very large, and extends to millions of pounds sterling. Some of them make from three to five hundred distinct dyes and all have patented specialities peculiar to themselves. The Badische and Farbwerk are particularly notable for alizarine and azo dyes; the Farbenfabriken for its series of benzo direct dyes for cotton, and for alizarines; the Actiengesellschaft for its Congo series of direct dyes, and for azo dyes for wool; Cassella's for the diamine range of direct dyes for cotton.

That the manufacture pays, notwithstanding a somewhat lavish expenditure, is evidenced by the fact that these firms pay dividends of 10 to 20 per cent. on their capital. What is the secret of their success? It lies very largely in the existence within all these works of two, or shall we say three departments. First, a chemical research laboratory or laboratories in which many chemists are engaged in the task of discovering new chemical combinations. Secondly, of textile dyeing and printing laboratories in which the methods of using the firm's products are worked out and new processes are discovered. Thirdly, a pattern card, book printing, and binding department, where the firms make all the pattern cards, by which they show their customer what effects the various dyes will produce, and print the various instruction books they issue.

One great advantage possessed by the German colour works, is in their command of abundant and cheap chemical skill and specially educated operatives. The Universities and Polytechnics of the country constantly turn out a throng of scientific chemists specially trained in the processes of chemical research and willing to work for wages that college graduates and the better class of operatives in England would refuse. The result is that the great aniline and chemical laboratories of Hœchst, Mainhur, Ludwigshafen, Elberfeld, and Berlin employ, in addition to their regular working force, a large staff of young chemists (from fifty to seventy at each establishment), whose sole function is that of research in the tireless quest for something new and valuable, whether it be a new colour, or pharmaceutical product, or a cheaper or more direct method of producing one of the products already known and in use. Mostly young graduates, fresh from the Universities, they work for small salaries in laboratories perfectly equipped by their employers, under contracts which provide that whatever valuable discovery they shall make be patented, and the patents transferred to the company, the inventor receiving a specified percentage of the profit accruing from its manufacture and sale.

A single happy discovery may thus make the fortune of the inventor, and, spurred on by such an incentive, many of the most important chemical discoveries of recent years have been made by men under 35 years of age, working for less than £100. a year, for great corporations, that pay annual dividends of 10 to 20 per cent. It is thus, in the consummate scientific skill, which is both abundant and cheap, that Germany enjoys a decided advantage, which enables her aniline chemists to dominate and control the coal tar colour manufacture of the world. It it useless for anyone, even an expert, to attempt to obtain from any laboratory in Germany any secret information concerning ingredients, or processes employed in the manufacture of colours. Although competition between the leading works is strong, their secrets are so well guarded that even the workmen, who carry on the manufacturing operations, are not permitted to know the full process involved in the creation of any finished product. Such is the system on which the research work of the German colour works is carried on.

Now let us turn to another department—the dyeing and printing laboratories. These, in all the larger works, are very elaborately fitted with dyeing and printing appliances; in some cases these are on a similar scale to those used in a print and dye works; in others, working models on a smaller scale are employed. This enables the firms to test the colours on a basis which will compare with practical working. These laboratories are in charge of skilled colourists, and in them are to be found trained chemists, who are engaged in applying the dyes to colouring all kinds of materials and developing new processes. There is no lack of help, for the capabilities of these laboratories are so well known, that persons from all quarters are only too willing to work in them in return for the experience they gain. These "voluntaires" are treated somewhat differently from the regular staff, and have greater freedom allowed them.

In these laboratories are prepared the various dyed and printed fabrics, by means of which the firm brings before the notice of textile colourists the methods of using, and the effects produced by using the dyes made by them. All the large firms issue very elaborate pattern cards and books, and often very elaborate instruction books costing a large amount of money. There is no doubt but that this system pays, although at first sight it would seem to incur wanton expenditure. It certainly is successful in keeping before consumers the varied manner in which the dyes may be used, and undoubtedly influences them to use dyestuffs that otherwise they would not, which result is precisely what the colour makers desire. Our English firms might adopt this system with advantage.

To ensure the production of the pattern cards, &c., to the best advantage, there is attached to the dyeing laboratories a small printing, bookbinding, and pattern card making establishment, which would not discredit a professional printer.

We have thus endeavoured to give some idea of the conditions under which the great German coal tar colour trade has been built up, and is being so profitably conducted, and we can only say to their English *confrères*, go and do likewise, and great shall be your reward.

PATENTS IN 1898.—Messrs. Stanley, Popplewell, and Co., chartered patent agents, write from 61 and 62, Chancery-lane: "A few details concerning patents for inventions may, we venture to think, be of interest to your readers. Although the statistics of the Government Patent Office are by no means infallible as an index of the activity of inventive genius, yet it is interesting to compare the figures of the year just closed with those of preceding years. The total number of applications for patents in 1898 was approximately 27,639, a falling off from the numbers in 1897 and 1896, which were 30,958 and 30,193 respectively. The boom in the cycle industry accounted for 6,000 and 5,000 during these two years. English inventors are giving more attention than formerly to foreign patents, which often prove more profitable than those of our own country. On the other hand, the number of foreigners taking out English patents appears to be on the increase. Women inventors contribute some hundreds of patent applications yearly, the proportion continuing with a strange regularity at 2·3 per cent. of the whole. It may then be concluded that, notwithstanding the decrease in the number of English applications, the world of invention is as active as ever."

THE FRENCH CHEMICAL TRADE IN 1897.

[SPECIALLY CONTRIBUTED.]

THE official returns of the trade and navigation of France in 1897, recently published in great detail, afford us an idea of the ramifications and values of the chemical and allied "industries." Imports and exports are divided into three classes, and the figures in each instance are as follows:—

	Imports.	*Exports.*
	£	£
Chemical products and manures ..	4,400,000	3,000,000
Prepared dyes	765 000	900,000
Colours	187,500	400,000

Of the chemical products, this country furnished in value £1,050,000., and took in return £600,000. Of colours, the figures were respectively £50,000. and £60,000., while of dyes the value was insignificant. Germany provided £765,000. of chemical products and £210,000. of coal tar products, and received £475,000. in chemical products and £35,000. in colours.

In chemical products, two articles alone account for nearly half the imports, nitrate of soda, over 200,000 tons being valued at £1,600,000., shipped direct from Chili, and 25,000 tons sulphate of copper, used so extensively in the vineyards of southern France, £430,000., almost exclusively of British origin. Chemical manures, 80,000 tons, were valued at £320,000., principally from Germany and Belgium, the English share being only some £60,000 Superphosphate of lime, 115,000 tons, was valued at £230,000., three-fourths of which was Belgian, and most of the remainder English. With the exception of sulphate of copper, these are admitted free of duty, the tariff rate on this substance, however, being equal to about 30s. per ton.

The coal tar products are grouped into two divisions, viz., those derived directly from the distillation of coal tar, valued at £125,000., of which nearly two-thirds was English, and the more valuable ones obtained from the distillation of coal itself, £220,000., of which Germany supplied five-sixths. The former are duty free, the latter pay about 4 per cent. The British alkali trade is practically excluded from France by the heavy duties. The import of caustic soda was only 1,300 tons, easily explained when it is stated that the duty is equivalent to £2. 15s. per ton. Of the 1,300 tons bicarbonate of soda, our makers also secured practically the monopoly; the duty in this instance was £2. 5s. per ton. But for soda crystals, they do not appear to have had a single order, the 125 tons imported having been from Belgium, and subjected to a duty of 15s. per ton, or nearly 50 per cent. of the declared value. Salammoniac, however, is on the free list, and of nearly 25,000 tons, valued at £250,000., English makers supplied 22,000 tons. Carbonate of potash is similarly favoured, but here the 1,750 tons imported was supplied by Belgium, Germany, and the United States. In the extremely miscellaneous selection of acids and oxides, this country comes off very badly, and though the quantities imported were rarely of much value, Germany secured the bulk of the trade. The supply of sulphuric and hydrochloric acids for instance, was almost entirely German; England does not figure in the return at all. Oxalic acid, upon which there is a duty equivalent to nearly 20 per cent. *ad valorem*, is more equally divided, but in boric acid and tartaric acid, Germany again has the decided advantage. In acetic and nitric acids, Belgium has almost the monopoly, England not being mentioned. The value of the entire import does not much exceed £100,000., and it is possibly one of those cases we hear so much about nowadays, where the British manufacturer does not consider small orders worth looking after.

The same remark applies to the various oxides, the import value of which was also about £100,000. Only those of cobalt, iron, and lead are subjected to duty, all the rest are free. Oxide of iron, the cheapest, is the solitary one in the list in which we prominently figure, and we supply about £3,000. of the £6,000 imported. The most important is oxide of lead, and here Belgium and Germany enjoy a practical monopoly. Tin and copper fall again to the share of Germany, oxide of zinc is supplied principally by the United States.

In dyes, cochineal, indigo, cutch, and coal tar dyes practically exhaust the list. The first three are free of duty when imported from the country of actual production, but subjected to a surtax when from any other. The bulk of the supply is, naturally, therefore from the former. The 650,000 lb of cochineal, valued at £35,000., was from Spain, or rather the Spanish possessions in the Atlantic. Of indigo, the bulk of the 2,400,000 lb., valued at £400,000., was from the East Indies and South America, small additional supplies having been obtained from England and other European countries. Cutch, again, to the extent of 6,000,000 lb., valued at £55,000., was obtained from the East Indies, and a little from Egypt. Coal tar dyes, needless to say, were the product of Germany, against whose manufacturers our own find it difficult to compete, even at home. The quantity of these was 2,650,000 lb., and the value £270,000., but there was a duty in this case equivalent to 15 per cent. *ad valorem* all round. In colours, Germany throughout maintains a decided pre-eminence, but in varnishes the British manufacturer still holds his own, as of a total of some £60 000. in value, we supplied three-fourths. Here, moreover, the duty was equal to 30 per cent.

The export of French chemicals is even more varied than the import, though falling considerable short of it in value, due to the absence of any such important product as nitrate of soda. Chemical manures, however, figure prominently in the list, the quantity having reached 100,000 tons, and the value £400,000. Germany alone took 80,000 tons of these. Other important products are raw tartar and cream of tartar; of the former, some 8,250,000 lb., valued at £240.000., and of the latter, 6,000,000 lb., worth £200,000. The United States were the principal customers in the first instance, Great Britain in the second. The manufacture of glycerine is also a French industry of some importance, the export having been 13,000,000 lb., valued at £32?,000. England and the United States were the most important purchasers, but Germany, Belgium, Holland, and Italy were likewise free users of the articles. Of chloride of lime, the export was 11,000 tons, valued at £110,000., and of superphospate of lime, 55,000 tons, worth £130,000. Common salt was shipped to the extent of 135,000 tons, valued at £80,000., the French fisheries in Newfoundland and Belgium absorbing the bulk of it. French alkali manufacturers likewise found customers across the Belgian frontier. Of soda, the total export was 23,000 tons, valued at £95,000., of which 20,000 tons went to Belgium. Of 4,750 tons of caustic soda, valued at £50,000, 3,500 tons were for the same destination, and of 12,500 tons of carbonate of potash, worth £200,000., 8,000 tons went to Belgium, 4,000 being shipped to England. It might be well worth the while of our English makers to institute inquiries into the reasons which enable France to supply Belgium in spite of the increased cost of production which the French protective tariff must entail, as against our own country.

Vegetable juices and extracts were shipped to the value of £150,000. Acids of different sorts found foreign and colonial markets to the extent of £280,000., the most important item being tartaric acid, £80,000., widely distributed, but of which Australia was the largest buyer. The only metallic oxides in which any trade of consequence was done, were those of lead and zinc. Of carbonate of lead, 1,600 tons was shipped to Belgium, out of a total of 2,100 tons, valued at £35 000. Markets were found for 750 tons chlorate of potassium, valued at £40,000., the English one being the most important. We also took from France 315 tons chlorate of lead, worth £14,000.

The dyes exported were mostly vegetable, these accounting for £675,000. of the total of £900,000.; most of the remainder being a re-export of indigo and cochineal. For the French vegetable dyes, Germany was much the largest buyer, the value of her purchases having been £270,000. Belgium follows for slightly over £100,000., then England for £85,000., the remainder having been distributed throughout almost every country in Europe. Among the colours writing ink is the most prominent item, amounting to £100,000, Though England was again the best customer, French inks are evidently much appreciated in all parts of the world. Indeed, the same may be said for almost every item under this heading.

There are few industries so cosmopolitan as the chemical and allied trades, and with the rapid progress being made in scientific knowledge, there are few capable of such extensive development. It behoves our manufacturers, therefore, to keep in touch with what is being done by our foreign rivals, and not to allow them to get the better of us anywhere, when the conditions of competition are fair. Each nation has

no doubt its own specialities, but each one must keep wide awake to the necessities of the hour. We must not permit other countries to supply the French markets with products our own manufacturers can turn out quite as cheaply, nor must we permit France to supplant us where we are already in possession.

REMINISCENCES OF A PULP SAMPLER.

[SPECIALLY CONTRIBUTED.]

THE analyst who is called upon to sample and test a parcel of wood pulp has at the best of times a thankless and a not well paid task. He does not fall between the proverbial two stools, but rather between three persons, for there is the paper mill, the pulp merchant, and the pulp maker to satisfy with his report, and it is quite impossible that he can satisfy all three. If his report be not favourable to the paper mill, or there is some difference between his test and theirs, the latter vote him an unreliable chemist, and won't have him again on the same errand. On the other hand, the pulp mill growls, and says the sampling has not been properly done; while the pulp merchant desires a report which shows the pulp to be right, for, if it be the other way, he has to make an allowance to the paper mill and pay the cost of the sampling, while the pulp makers have a most uncomfortable habit of neglecting to refund the merchant this allowance. However, the analyst has only to work conscientiously to overcome all these difficultes.

Times have changed, so has pulp sampling. In the early days each mill had its own ideas on the subject. I remember the first time I went sampling, when pulp first came in, and I was, I must confess, a greenhorn on the subject. I have learnt much since then. It was at a mill near Manchester, now gone out of the trade. We took a number of bales and weighed them on a railway trolley; then we took off the wrappers and tared them. We don't do that nowadays. Then we took about five sheets out of each bale and about a quarter of each sheet for the sample, which, it is needless to remark, was of no little weight, as I found for myself at the end of a two-mile walk to the nearest railway station.

Then I used to have not a few wordy fights at the mill as to the right method of calculating the results—in particular, how to work in the loss of weight; short weight which occurs with moist pulp. Then an authority in the pulp trade in the northern district devised a method which was wrong, and it took a long time to fight it out. Now one rarely has any such trouble.

Another difficulty was the "atmospheric moisture." Some considered that this was the amount of moisture which absolutely dry pulp would take up on standing for 24 hours. They used to dry the samples, and then let them be exposed for 24 hours and assume the result to be air dry pulp; but as dry pulp might take up anything from 6 to 10 per cent. moisture, according to the state of the weather, naturally such a proceeding was not satisfactory to all parties, and it was a good thing when the present 10 per cent. basis was adopted.

In travelling about, one meets with quite a number of adventures. I remember on one occasion going to a mill in Yorkshire, and, after a two-mile walk up hill, finding only one bale to sample, and that turned out right.

At another mill in the Midlands they had no small scales, so I had to weigh the bales in bulk, pack up the sample carefully, and take it home before I could weigh it. That mill, or the proprietors thereof, talked learnedly of the loss of weight which would occur to the sample between my leaving the mill and reaching home the next day. They would probably be surprised to learn that the sample, which weighed 50 lb., did not lose half an ounce. How the firm weighed their sample I do not know; certainly they could not weigh to two ounces. Another mill in my mind in the Yorkshire district used to speak very learnedly about percentages, but their practice was very different to their profession, for, with the scales they had, I am sure they could not ascertain the moisture correctly within 3 per cent. I used to weigh my samples on their scales, but checked them on my own.

Travelling on this work to so many places one meets with both pleasant and unpleasant experiences. It is rather unpleasant to arrive at an important junction just in time to see the train you want to travel by, roll out at one end of the station as you come in at the other, and then be told you have two hours to wait for the next, or you might go to a station along the line, and by walking about two miles get to your destination. Rather pleasant this on a snowy December morning. Unpleasant, too, it is to be 100 miles away from home and finish your work five minutes too late, so that you miss a quick train and have to wait an hour and a half for the next, which is a slow one, landing you home in the small hours of the next morning. One sometimes has to go to small out-of-the-way places (how fond paper mills are of such places) where no refreshment for the inner man can be got; and, when one has been sampling 50 to 60 bales, one gets fearfully hungry and is ready to devour anything. But nothing is to be had, and perforce you have to wait till you get back to civilised parts. Unpleasant, too, it is to go to some mills where they look on you as an interploper and will not help you in your work.

There are, however, many pleasurable incidents. Some mills are located in pleasant places where one sees some of the beauty spots of nature. I could name many mills I have been to where, during the walk to and fro, you can enjoy the charming scenery, especially if the journey is made in the late summer and early autumn months when nature's garb of flowers and trees is at its best. Shall I name a few such places? Oughty Bridge, Oakenclough, Feniscowles, Rawcliffe, and Flint. Sometimes one gets treated hospitably, for paper mill makers are a very good sort on the whole, and they know that pulp sampling is tedious and dry work, and a little refreshment afterwards does not come amiss.

In travelling to some of these mills I have often asked myself the question, why are they planted in such places, far, oh! so far from the busy haunts of men, two, three, or four miles up hill from the nearest railway station? They have to cart their raw materials and finished paper all that distance, thus entailing considerable expense for haulage. How can such mills compete with others which are close to a railway or canal, and where the expense of haulage is small?

In having to visit various mills one sees something of the different ways in which the pulp is stored, and how the work of the pulp store is organised. In some places but little provision is made for the pulp. It is perhaps kept in stacks out of doors, subject to all the vicissitudes of weather; it may get rained on; it may become dry or frozen, and yet the paper makers expect the pulp to keep in good condition. At the other mills it is kept under cover in dry places. One mill kept one lot of pulp I had to sample in a hot room, close to the straw boilers, with the result that the bales were very dry. At some mills the foreman storekeeper has some ability and knows how to manage his men, and at such places it is a pleasure to sample, for you get through the work without unnecessary trouble, expeditiously, and well. At other places one has to wait a long time. Then the work goes on slowly, for the men don't quite know what to do, and the foreman does not regard you with a favourable eye and won't help you much. At some mills I have sampled 45 bales in an hour; at another it has taken me more than twice as long for the same number.

[We do not think that our correspondent's strictures upon the Paper Mills are intended for general application. It is true that at a few mills the chemist may get the treatment of an enemy or an intruder, but in the majority of cases his functions have come to be recognised, and what we may call the physical side of the sampling process is now properly organised. The task of sampling pulp is in itself essentially a tedious one, and a sampler finds need to possess his soul in patience, even under the most favourable circumstances.—Ed. *C. T. J.*]

Chemicals in Sewers—Heavy Fines.—At the West Ham (London) Police Court, recently, Mr. Gillespie gave his decision on two adjourned summonses, at the instance of the West Ham Corporation, for throwing, or suffering to be thrown, into a sewer belonging to that body, matter by which the sewer might be injured, and chemical refuse which was dangerous. He said he had carefully gone through all the evidence, and he was satisfied that the West Ham Corporation had made out their case. On the first summons he inflicted a fine of £5. and eighty guineas costs, and on the second £1. fine and seven shillings costs, making in all £90. 7s. 0d.

SILENT HEATERS AND WATER LIFTERS.

MANY and great improvements have been made of late years in mechanical appliances of simple construction for heating, agitating, and raising liquids. The application of scientific methods in the management of chemical and bleachworks, steam laundries, and breweries created a demand, and it has certainly been ably responded to by engineers. A firm which has long been well known for appliances of this nature is that of Messrs. Holden and Brooke, Ltd., Sirius Works, West Gorton, Manchester, and we illustrate herewith a few of their improved productions.

FIG. 1.

In Fig. 1 we show a silent heater, in which the main advantage is that liquids may be rapidly heated in any kind of tank, vat, or reservoir by the direct application of live steam, without the crackling noise usually associated with the introduction of steam into water which is at a lower temperature than the steam itself.

Coils of pipe occupy much more room than one of these heaters, with which, moreover, the boiling is achieved with far greater rapidity.

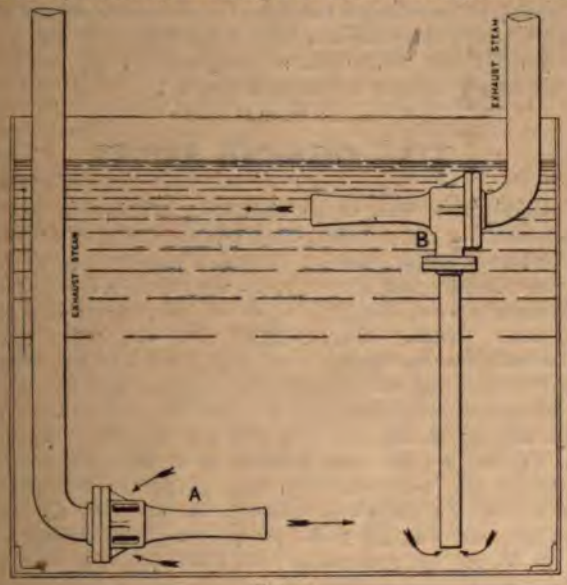


FIG. 2.

Fig. 2 illustrates another form of exhaust steam heater and circulariser. The depth at which the heater A is placed depends solely upon the pressure of the exhaust, which must, of course, be greater than the head of water. If the exhaust is not strong enough a combined lifter and heater (as shown at B) can be employed to assist the circulation. They are made in brass, lead, iron, and acid-resisting alloys.

A water-lifter, which is now largely used in brickworks, quarries, and for industrial purposes, is shown in Fig. 3. It lifts and forces with but a small expenditure of steam. This pattern is made in brass, with loose tapped flanges. It is shown at work on the right hand side of Fig. 4. On the left hand side a more powerful type (with iron body) is represented, which will force one foot vertical for every pound of steam pressure, while lifting 14 feet at the same time. These water raisers are also made in special alloys for acids and corrosive materials.

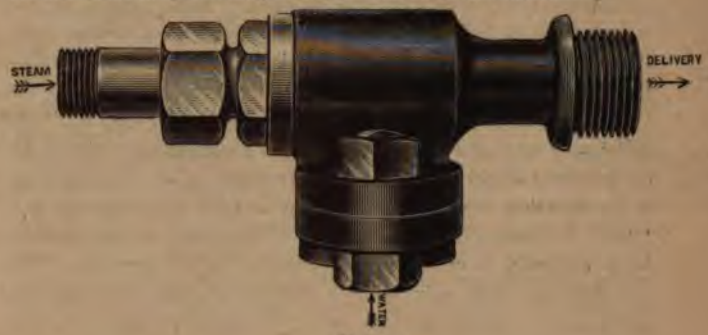


FIG. 3.

It will be obvious to anyone with mechanical knowledge that these water raisers are based on the principle of injectors, which have long been a speciality with Messrs. Holden and Brooke. Their exhaust steam injector does with waste steam what an ordinary injector or feed

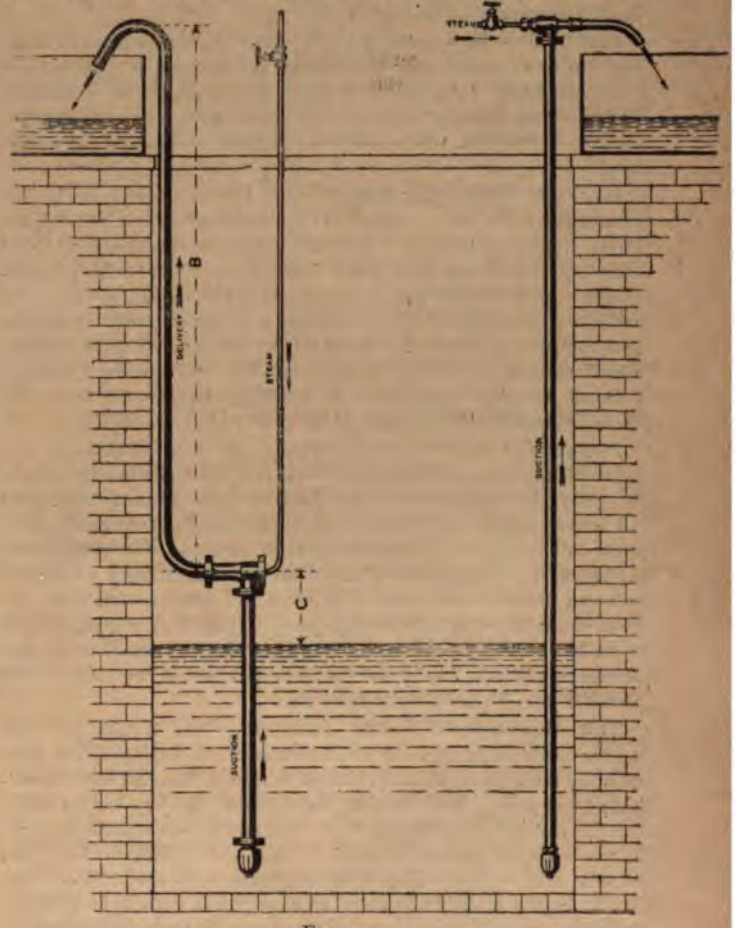


FIG. 4.

pump does by means of live steam direct from the boiler, and at the same time provides hotter water without the aid of a feed-water heater. In consequence an economy in coal of 25% to 50% (or an equivalent increase in the steaming capacity of the boiler) is attained, a claim which is confirmed by actual users. A further notable advantage is that whereas feed-water heaters invariably increase back pressure, these exhaust injectors positively reduce it. They are made in 16 sizes, and range from £7. upwards.

Trade Notes.

"The Chemical Trade Journal" Directory of Chemical Manufacturers, Merchants, Brokers, Agents, Experts, and Analysts, and Makers of Chemical Plant and Materials. We are engaged in the endeavour to put before our readers a substantial volume containing the before-mentioned information. The work is much greater than we had anticipated and the Directory will not be ready before the middle of June in the present year. During the latter part of January and early in February we shall send out a form, asking for certain particulars from all those who should be included in the Directory; if any firm interested in the chemical trade does not receive a circular, prospectus, and "particulars"-form before the 15th day of February next, we would be much obliged if he or they will communicate with us at once. The Directory will be strongly bound in cloth and published at twenty-one shillings nett. The subscription price, for cash with order, before the day of publication is sixteen shillings.

Society of Chemical Industry.—*Nottingham Section.*—The Burton meeting having been unavoidably abandoned, the fourth meeting of the session was held at University College, Nottingham, on Wednesday, January 25th, when the Secretary read a "Note on Hide Powder Filters," by Professor H. R. Procter.

Sulphur in Manchester Gas.—The Gas Committee are being urged to hurry on the work of purifying the gas supply. Many complaints are heard of the excess of sulphur contained in the illuminant. The effects are injurious to health, which is a very serious consideration, and also to furniture, which is a source of great irritation to every good householder.

Company Mems.—The General Water Power, Limited, has invited subscriptions this week for the shares of the Giffre Electro-Chemical and Power Company, Limited, which has been formed for the purpose of acquiring all the shares of a French Company, called the Société Electro-chimique du Giffre, carrying on business in Haute Savoie, France. The authorised share capital of this company is £140,000., and the present issue consists of £130,000., of which 20,000 will be issued to the vendors. The businesses of Messrs. Mather and Platt and Dowson Taylor, of Grinnell Sprinkler fame, have been amalgamated in the form of a limited company with a capital of £775,000.

Precious Metal Scrap.—In consequence of the increased general use of platinum in the chemical and electrical industries during the past few years, the old-platinum dealers have been exceptionally busy. Our old friends, Messrs. Derby and Co., platinum merchants of 44, Clerkenwell-road, E.C., have just increased their plant and staff to deal with increasing trade demands. Their business was established in the last century; precious-metal scrap of all kinds, old utensils, wire, sheet, and gauze is purchased by them in any quantity; and they also supply new apparatus, such as crucibles, etc., in gold, silver, or platinum. A large portion of Messrs. Derby and Co.'s business lies in working up the platinum from disused electric-lamp tops.

The Manchester Sewer Fatality.—The inquiry into the terrible sewer catastrophe, by which two men lost their lives, has made clear the cause of the disaster, though it has not fastened the responsibility on anyone. After hearing the evidence the jury had no doubt that the cause of the poisoning of the unfortunate men was the presence in the sewer of noxious material in improper quanties. That this material came from workshops in the neighbourhood was equally obvious, but the inquiry broke down when an attempt was made to fix upon the particular firm or firms who utilise the sewers in a manner contrary to the provisions of the Public Health Act. The point is one which the Corporation officials, charged with the duty of supervising the sewage arrangements of the city, will watch carefully, no doubt, with a view to stopping the recurrence of similar misfortunes. The law, it is to be hoped, arms them with sufficient authority to take all measures necessary for the protection of the lives of the unenvied class who engage in sewer work. [We shall have occasion to refer to this matter again in an early issue.—Ed. *C.T.J.*]

Market Reports.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, Tuesday.

The associated Scottish makers of bichromate of potash and bichromate of soda have given an additional 2½ per cent. of discount, bringing it up to 6 per cent. The price itself remains unchanged, viz., at 3¼d. per lb. for potash and 2¾d. for soda. It is believed that it is still the increasing pressure of the foreign opposition which has led to this latest concession. Sulphate of copper has made a further substantial advance and is being dealt in at the rise, both for prompt and forward. Sulphate of ammonia keeps very steady, and since last week both prompt and forward business has been done at £10. 10. Leith. General chemicals are unchanged. In the mineral oil and solid paraffin section activity prevails. Foreign oils (burning), have come down a fraction, but home deliveries being under contract, the price of the native oil is not yet affected. Solid paraffins are dearer, and a rise in candles (for which manufacture these paraffins are chiefly used), is regarded as certain when next season comes to be arranged for.

Chief prices current are :—Soda crystals, £2. 7s. 6d. to £2. 12s. 6d. nett, Tyne; soda ash, £4. 2s. 6d. to £4. 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 5s. to £4. 15s. nett, Glasgow; caustic soda, white, 74° £7. 7s. 6d., 70/72° £6. 17s. 6d., 60/62° £6., and cream 60/62° £6., all nett, Liverpool; bleaching powder, 35/37°, £5. to £5. 10s. nett, Tyne; saltcake, 28s 6d.; borax, English refined, £16., and boracic acid, £26. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s., nett, Liverpool; bichromate of potash, 3½d., less 6% for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d., less 6% for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow); chlorate of potash, 3½d., less 5% Liverpool; nitrate of soda, 7s. 6d. to 7s. 9d.; sulphate of ammonia, £10. 10s. 0d. prompt f.o.b. Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £20. 10s. 0d. prompt, less 5% Liverpool; paraffin scale, hard, 1⅞d. to 2d. per lb., and soft 2d. per lb.; paraffin wax, 120° semi-refined, 2¼d. to 2½d. per lb.; paraffin spirit (naphtha), 8d. to 9d. per gal; paraffin oil (burning), No. 1, 6½d.; and crystal, 7d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 15s. to £5. 5s., 885° £5. 10s. to £6., and 890/895° £6. 5s. to £6. 10s. Week's imports of sugar at Greenock were *nil.*

TYNE CHEMICAL REPORT.

Tuesday.

Chemicals show little or no alteration, and there is not much improvement in the demand. Soda crystals steady at £2. 12s. 6d. per ton, gross weight, locally. Sulphur is steady at £4. 15s. to £5. per ton. Caustic, 70%, £7. to £7. 5s., and 76/77% £8. per ton.

Bleaching powder, softs, £5. 0s. per ton, nett; do. hards, £5. 5s. per ton, nett; caustic soda, 76/77% £8. and 70% £7. 0s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. 0d. per ton, nett; blanc fixe, £6. 10s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt is firm at 9s. 6d. per ton, f.o.b. Tees.

COALS.—Trade continues very firm, and there is an excellent demand. The various qualities of coal are strongly held at full prices. Coke is also in strong demand. Best Northumbrian steam, 10s. to

10s. 6d. per ton; second qualities, 9s to 9s. 6d. per ton; small steam, 4s. 6d. to 5s. per ton; gas coals, 10s. to 11s. per ton; bunker coals, 8s. to 8s. 6d. per ton; coke, 18s to 21s. per ton.

TAR AND AMMONIA PRODUCTS.

Benzols are dull at 8d. for 90's and 50/90's, there being little life in them even at this figure. Carbolic acids are fairly steady at 1s. 11d. for 60% crude, and 6¾d. for 40% crystals. Naphthas are unchanged, nearest values being 1s 2d. for solvent, and 4d. for crude. Anthracene weak at 3½d. to 3¾d. for 30% A and 2½d. to 3d. for B. Pitch quiet at 24s. 6d, f.o b. East Coast.

Sulphate of ammonia is rather easier, and the market quiet. For February/June Beckton price is £10. 2s. 6d. Closing prompt values are:—Beckton £—. —s., London outside makes, £10 8s 9d., Hull £10. 8s. 9d., and Leith £10. 8s 9d. to £10. 10s. Nitrate of soda steady.

REPORT ON MANURE MATERIAL.

The market has been somewhat quieter during the week, but a fair amount of business is being done. The quotation for 77/80% Florida rock has been advanced to about 8¼d. per unit, the bulk of the 1899 production having been now sold, and raisers being indifferent about making further sales. Quotations for other descriptions of rock are, however, unchanged. Shippers of East Indian bone meal are not quite so firm in their ideas, and £5. 3s. 9d. per ton, ex quay Liverpool, would be accepted for February-March shipment. For spot parcels £5. 5s. to £5. 7s. 6d. per ton, according to quality, would have to be paid, there being very little available. Nitrate of soda is, owing to arrivals, a shade easier, and 7s. 6d. per cwt. would now be accepted for good up to 7s. 7½d. per cwt. for fine quality.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade, as a whole, works are well engaged with orders, and there is a better tone in the market, though as yet there are no substantial alterations in values. Caustic soda, subject to variations for particular markets, is steady on the spot, f.o.b Liverpool, at 77% £7 12s. 6d., 74% £7. 7s. 6d., 70% £6. 17s. 6d., 60% £5. 17s 6d. per ton. Ammonia alkali, 58%, remains at £4. 2s. 6d. bags, f.o r. Soda crystals, bags, 50s. per ton. Bicarbonate, kegs, f.o.b, £6. 10s. per ton. Leblanc ash, nominal, f.o.b., at $\frac{15}{16}$d. per degree. Bleaching powder is in good demand, both for home and export trade, and price has slightly improved to £4. 5s. softwoods, f.o.r., and £5. to £5. 5s. hardwoods, f.o.b. Liverpool. Chlorates are practically unchanged. Soda at 3¾d. and potash 3½d. per lb. Saltcake steady at 27s. 6d. to 28s. 6d. in bulk, f.o.r. Sulphur unaltered at £4 12s. 6d. per ton. Sulphate of copper has had a further strong advance, quotations now being £22. 15s. to £23. for January/March shipments. Potash, caustic and carbonate, are in fair request, and prices unchanged. Prussiate of potash firm at 7d. Soda 5¼d. per lb. Cyanide scarce and dearer, at 1s. 1d. per lb. Sulphocyanides in only moderate demand, and prices are without alteration. Brown acetate of lime rather easier, at £5. 5s. to £5. 7s. 6d. c.i.f. English makes are lower. For grey there is more inquiry, and price firmer at £7. 17s. 6d. per ton. White acetate of lead steady at £25. Acetate of soda in better request at £12. 10s. to £12. 15s. ex-ship. White powdered arsenic moving freely and with reduced stocks; price is firm at £16. 10s., with advancing tendency. Green copperas is in good general request at 24s. to 25s. per ton. Zinc salts are firm. Tin crystals advanced to 6½d. per lb. Glycerine is rather firmer. Oxalic acid 3d. per lb. Tartaric acid 1s per lb. Borax continues firm at 16s. In nitrate of soda there is a slight reduction in quottaion for forward shipments.

THE METAL MARKETS.

LONDON, WEDNESDAY.—Pig iron steady: Scotch warrants closed at 54s. 8½d.; Middlesbrough, 48s. 2½d. cash; and hematite, 60s. 5d. Copper firmer: Chili bars, G. O. B.'s and G. M. B.'s, closed at £67. 1s. 3d. to £67. 6s. 3d. cash, and £67. 5s. 0d. to £67. 10s. 0d. three months. Tin variable: Straits closed at £110. 0s. to £110. 10s. cash, and £109. 7s. 6d. to £109. 17s. 6d. three months; Australian, £110. 12s 6d.; English ingots, £114. Lead steady: Spanish, £13. 3s. 9d. to £13. 5s; English, £13. 7s. 6d.; Silesian spelter, ordinary, £25. 10s. 0d. to £25 15s. Nickel, 1s. 2½d. Antimony, £37. 0s. Quicksilver: First hands, £8. 0s.; second hands, £7. 19s. 0d. *Copper shares* steady: Cape, 4$\frac{7}{16}$ to 4$\frac{5}{16}$; Copiapo, 3$\frac{1}{16}$ to 3$\frac{3}{16}$; Libiola, 2⅝ to 2⅞; Mason and Barry, 3½ to 3¾; Rio Tinto, 35⅝ to 35¾; Tharsis, 8⅜ to 8⅝.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—The markets here are firmer, and prices ruling higher than a week ago—a situation caused more by limited supply than a stimulated demand. The principal imports for the year as against the same time a year ago have been—wheat, 131,073 qrs. against 101,875 qrs.; flour, 7,550 cwts., against 4,068 cwts; linseed, 12,348 qrs., against 23,682 qrs.; rapeseed, 2,155 cwts., against 7,358 cwts.; cottonseed, 10,649 tons, against 20,462 tons; oilcake, 1,681 tons, against 1,356 tons; olive oil, 98 tuns, against 236 tuns. Linseed oil is dearer, being quoted 16s. to 16s. 3d., spot, naked, and same to April; 16s., May-August; boiled and refined, £1. to £1. 10s. per ton extra. Refined cotton oil firmer: 13s. 3d. paid, naked, spot and month, whereat buyers; February-April, 13s. 9d.; and 13s. 10½d. May-August. Crude is quoted (naked) 12s. 1½d., spot and January-April. Barrels £1. 10s. and ordinary casks £1. per ton extra. Castor oil is quoted cheaper—cold drawn pure pharmaceutical, 28s. 6d. per cwt in barrels, 3$\frac{7}{16}$d. per lb. in cases; pure firsts, 25s. 6d. in barrels, in cases 3d. per lb.; pure seconds, 24s 6d. in barrels, in cases 2⅞d. per lb. Oleine, in sympathy with fats, is dearer by 10s. per ton—£17. 10s. to £19. 10s per ton. Olive oil £31. to £33. per tun. Turpentine unchanged. Olive oil soap £16. to £18. per ton. Cod oil quiet at £16. to £18. per ton. Pine oil 9s. Resins unchanged.

CAKES.—Not much business moving, yet prices remain firm:—Linseed, 95% pure, £8. 5s to £8. 7s. 6d. per ton; Russians, £7 7s. 6d. to £7. 12s. 6d. Oilcakes (linseed), £7 to £7. 2s. 6d. Cotton cakes scarce and dear, with not many fresh orders, best makes £4 17s. 6d. to £5.; seconds £4. 15s. to £4. 16s. 3d. Rape cakes: Black Sea, £4.; East Indian, £5. per ton.

PAINTS.—Business promises well during the year if the winter continues open. Leads from £19. to £20. for white, in oil. Red leads £16. to £17. per ton. Dry mineral colours £4. to £8. per ton. Paints from £10. per ton. Black varnish £5. 10s. per ton. Paint remover 25s. per cwt. Oak varnish 5s. 6d. per gallon.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

OILS.—Palm oil remains firm, and sellers are only offering small quantities. There is, nevertheless, a fair amount of business doing, including soft oils at £21. and Lagos, £21. 15s spot. Olive is very strong and scarce at £32. to £35. per tun for Spanish. Linseed has enjoyed a firm market, Liverpool makes in export casks closing steady at 18s. 6d. to 19s. cwt. Cottonseed maintains its improvement, Liverpool refined ruling firm at 15s 6d. to 16s. cwt. In castor oil, shippers' prices seem rather above buyers' ideas, and though good seconds Calcutta has been done for May/June at 3d., the quantity available on spot for 3$\frac{1}{16}$d. is very limited; French is offering at 3d. Tallow continues in good demand at full rates, sales being fairly active. Resin is still fetching full rates, with a moderate inquiry. Spirits of turpentine are in fairly good demand at 31s. 9d. cwt. Petroleum is quiet, with American at 6⅝d. to 8d., and Russian, 6d. per gallon.

CAKES.—Owing to arrivals of American Western linseed there were sellers of quay parcels at 2s. 6d. reduction, but a good business was transacted at £6. 17s. 6d. to £7. 2s. 6d; whilst other imported descriptions were in only poor request, Bombay being quoted at £7. 7s. 6d. to £7. 10s., River Plate at £7. 10s., and Russian at £7. 15s. to £7. 17s. 6d. per ton. Liverpool makes continue to be well held, and very fair sales are reported at £8. 5s to £8. 15s. per ton. American decorticated cottonseed are in continued good demand, and holders remain firm at £6. to £6. 5s., according to quality, with moderate sales in Liverpool makes at £6. 10s. to £6. 15s. per ton. Undecorticated Liverpool makes are in continued good demand at previous full rates, viz., £4. 17s. 6d. to £5. 5s., according to brand, but supplies of prime quality Egyptian are still wanted, with a fair inquiry experienced, and £4. 15s. per ton is now the value for moderate quantities.

New Companies.

Fleming's Roumanian Oil Company, Ltd.—Capital £30,000. in £1. shares (17,500 cum. pref.). This company has been formed to acquire and carry on the business of oil boilers and seed oil crushers carried on in Roumania by Fleming's Oil and Chemical Co., Ltd., and to adopt an agreement with the said company. The subscribers to the memorandum of association are:—R. B. Fraser, 101, Leadenhall-street, E.C., chemical manufacturer; G. Innes, Raleigh, Norfolk-road, Thornton Heath, accountant; J. J. Hayhoe, 93, Albert-road, Walthamstow, oilman; R. G. Tugwood, St. Mary's, New Shoreham, wholesale druggist; A. E. Thompson, 12, St. Crewys-road, Peckham, S.E., accountant; H. Morley, 1, Cuthill-road, Denmark Hill, S.E., chemist; F. B. Fowler, Shipping Exchange, Billiter-street, E.C., traveller.

Astley Cooper, Ltd.—Capital £10,000. in £5. shares. This company has been formed to acquire and carry on the business of an analytical, consulting, manufacturing and photographic chemist, carried on at the Oatlands Chemical Works, Leeds, as "Astley Cooper & Co." The number of directors is not to be less than 3 nor more than 5; the first are A. Cooper, Kate Cooper, and W. E. Denham; qualification, £100; remuneration as fixed by the company. Registered office, 37a, Albion-street, Leeds.

Borax Consolidated, Ltd.—Capital, £1,400,000. in £10. shares (of which 80,000 are 5½% cum. pref.). This company has been formed to acquire and take over as going concerns (1) the business of the Pacific Borax and Redwood's Chemical Works, Ltd.; (2) the business of the Borax Co., Ltd.; (3) the business of the Société Lyonnaise des Mines et Usines de Borax, of Lyons and Vienna; (4) the share capital of Mear and Green, Limited; to enter into an agreement with L. Hoyt de Friese and to carry on the business of borax and boracic acid manufacturers, manufacturing chemists, druggists, drysalters, oil and colourmen, etc. The subscribers to the memorandum of association are:—A. Wilson, 2, Dartmouth Grove, Blackheath, Kt.; F. M. Smith, 101, Sansome-street, San Francisco, merchant; John M. Williams, 17, Gresham House, E.C., gent; R. C. Baker, 13, Bankside, Southwark, S.E., chemical manufacturer; H. A. Adkin, 46, Queen Victoria-street, E.C., solicitor; H. Evan Thomas, 14, Billiter-street, E.C., barrister; W. L. Plaskitt, 17, Throgmorton Avenue, E.C., gent.

Inchbrook and Panderma Borax Co., Ltd.—Capital £300,000. in £1. shares (150,000 pref.). This company has been formed to adopt an agreement with H. E. Massey, and to manufacture, sell, and deal in boracite, borax, boracic acid or boric acid, boron, etc. The subscribers to the memorandum of association are:—A. I. S. Godfrey, Junior Army and Navy Club, S.W., captain; L. E. Steyner, West Riding Regiment, Dover, lieutenant; C. Staniforth, St. James' Club, Piccadilly, gentleman; G. B. Massingberd-Mundy, South Ormsby, Alford (Lincs.), gentleman; E. Richardson, 32, Lynton-road, Crouch End, N., clerk; W. B. Pipkin, 25, Thorngate-road, St. Peter's Park, W., clerk; H. Hall, 5, Sussex-road, Holloway, N., accountant.

W. H. Jamison, Ltd.—Capital £15,000. in £10. shares (7,500 pref.). This company has been formed to acquire the business carried on at Barn Meadow Mill, Dukinfield, as "W. H. Jamison," and to carry on the business of manufacturers of and dealers in dyewood, tannin and other extracts and dyes, etc. The subscribers to the memorandum of association are:—Mrs. S. Jamison, Hill Side, Hyde; W. H. Jamison, Woodbine Terrace, King-street, Dukinfield, Cheshire, drysalter; E. A. Jamison, 80, Old-road, Hyde, Cheshire; Miss M. A. Jamison, Hill Side, Hyde; Miss S. G. Jamison, Hill Side, Hyde; Miss A. J. Jamison, Hill Side, Hyde; A. C. Jamison, Polefield Villa; Prestwich, drysalter.

FOREIGN REMITTANCES.

Owing to the inconvenience created by the various ways in which foreign subscriptions are remitted, we respectfully beg to inform subscribers that a *Crossed* Money Order is the most satisfactory method of remitting, both for them and ourselves. In the case of a Money Order, a letter advising us of same should always be sent otherwise, owing to post-office formalities, much delay in tracing and acknowledging foreign remittances is inevitably entailed in this country.

Gazette Notices.

PARTNERSHIPS DISSOLVED.

S. C. Puddy, W. F. Harman, and G. F. Burry, fibre dressers and printing ink manufacturers, Bow-road, E., under the style of Burry, Harman, & Co., so far as regards W. F. Harman.

G. Dobson and T. D. Macdonald, tarpauling manufacturers, Liverpool, under the style of Reynolds & Co.

G. W. Allen and E. A. Cooke, general brass foundry, Birmingham, under the style of Selby & Co.

IMPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.

Week ending January 14th.

Acetone—		
Germany,	15 drs.	E. Catlin
,,	25	R. W. Greeff & Co.
Alkali—		
Holland,	100 c.	J. Barber & Co.
Alumina—		
Germany.	101 cks.	H. Wallace & Co.
Alumina Sulphate—		
Belgium,	£65	R. W. Greeff & Co
Alumite—		
Sydney,	751.	J. Allen & Co.
Ammonia—		
Holland,	£19	Morison, Pollexfin & Co.
Ammonium Chloride—		
Holland,	£40	H. Lorenz
Ammonium Oxalate—		
Holland,	£85	R. W. Greeff & Co.
Antimony Sulphide—		
France,	6 cks.	Petri Brs.
Asbestos—		
Italy,	£175	Pickford & Co.
,,	133	British Asbestos Co.
Germany,	6	L. & I. D. Jt. Co.
U. States,	400	W. Byford
N. Russia,	393	Millwall Dock Co.
U. States,	30	Atlantic Transport Co.
Barytes—		
Germany,	48 pks.	W. Harrison & Co.
Holland,	300	,,
Holland,	33	R. W. Greeff & Co.
,,	2	J. Barber & Co.
Belgium,	87	J. L. Lyon & Co.
Germany,	38	,,
Belgium,	100	W. Harrison & Co
Germany,	32	R. W. Greeff & Co.
Bleaching Powder—		
Belgium,	46 cks.	D. T. Domeier & Co.
Bone Meal—		
E. Indies,	100 t.	Matthews & Luff
,,	100	W. Norfolk Farmers M. Co.
,,	100	Fox, Roy & Co.
Bones—		
Cape,	9 t.	Brown & Elmslie
Boracic Acid—		
Italy,	21 pks.	Nichs. Wvs. Ld.
Bromine—		
Germany,	20 pks.	A. & M. Zimmermann
Caoutchouc—		
Natal,	10 c.	L. & I. D. Jt. Co.
Straits,	25	60 cks. Prop. Bull Wf.
Belgium,	46	,,
China,	4	W. M. Smith & Sons
Germany,	145	,,
,,	8	Stiebel Brs.
Sydney,	7	Lewis & Peat
France,	1	E. Flageollet & Co.
,,	102	Lewis & Peat
Germany,	17	F. Huth & Co.
Holland,	28	J. Owen
Madagascar,	9	Procter Brs.
Zanzibar,	5	L. & I. D. Jt. Co.
Hong Kong,	1	,,
Thursday Is.,	8	McIlwraith, McEacharn & Co.
B. Guiana,	28	Jackson & Till
Straits,	50	Gilman Brs & Co.
,,	184	E. Boustead & Co.
,,	670	H. W. Jewesbury & Co.
France,	7 cks.	H. Johnson & Sons
Castor Oil—		
E. Indies,	400 cs.	W. Vaughan
Italy,	20	A. & M. Zimmermann
,,	25	Stebbing & Co.
,,	25	Barron, Harveys & Co.
,,	10	May, Roberts & Co.
,,	20	Baiss. Brs. & Co.
E. Indies,	145 cks.	Cayzer, Irvine & Co.
Caustic Potash—		
France,	4 dms.	J. A Reid
Chemicals (*otherwise undescribed*)		
Belgium,	£143	T. Palmer
,,	200	J. Fewkes
,,	200	T. H. Lee
Germany,	45	,,
,,	450	L. & I. D. Jt. Co.
,,	432	A. & M. Zimmermann
,,	200	Craven & Co.
,,	137	Elkan & Co.
Belgium,	17	John Cockerill Line
France.	6	Bennett S. S. Co.
Germany,	10	R. W. Greeff & Co.
,,	57	Butler's Wf., Ld.
Holland,	61	T. H. Lee
France,	25	Mory & Co.
U. States,	510	H. Harkness
,,	420	B. & F. Wf. Co., Ld.
Belgium,	8	D. C. Thomas & Sons
Cream of Tartar—		
Holland,	4 pks.	Kirkpatrick, Barr & Co.
Spain,	1	W. E. Aylwin & Co.
France,	8	C. Atkins & Nisbet
,,	4	Blackmore, Leconte & Co.
,,	5	C. Christophersen & Co.
,,	50	W. C. Bacon & Co.
,,	5	M. Ashby, Ld.
Italy,	25	W. & C. Pantin
Dried Blood—		
E. Indies,	6 t.	C. W. Hay
Dyestuffs—		
Argols		
Italy,	381 pks.	B. Jacob & Sons
,,	22	Thames S. T. & L. Co., Ld.
Cape,	44	Chalmers, Guthrie & Co.
Cochineal		
Canary Is.,	10 pks.	W. M. Smith & Son
Extracts		
U. States,	20 pks.	Rosenberg, Loewe & Co. Succrs.

Germany, 15 pks. T. H. Lee
France, 100 B. & F. Wf. Co., Ltd.

Gambier
Straits, 930 pks. J. Swire & Sons
Japan, 496 Bellamy's Wf., Ld.
Straits, 506 Union L. Co., Ld.

Indigo
E. Indies, 6 chts. Croysdale & Co.
" 28 Arbuthnot, Latham & Co.
" 6 J. Kenyon & Sons
" 3 T. Barlow & Bro.
" 20 J. W. Cook & Co., Ld.
" 25 Lon. & Til. Ltge. C. & D. Co., Ld.
" 24 Parry & Co.
" 24 L. & I. D. Jt. Co.
Holland, 1 "
E. Indies, 43 P. & O. Co.

Myrabolams
E. Indies, 1,240 pks. Baxter & Hoare
" 1,366 H. J. Perlbach & Co.
" 1,409 L. & I. D. Jt. Co.
" 935 Dalton & Young
" 2,350 P. & O. Co.

Orchella
Portugal, 52 pks. Prop. Bull Wf.
Germany, 80 F. Huth & Co

Saffron
Spain, 1 pk. J. Barber & Co.

Shumac
Italy, 600 pks. J. Kitchen, Ld.

Tanners' Bark
Natal, 46 t. A. & W. Nesbitt

Turmeric
E. Indies, 42 pks. L. & I. D. Jt. Co.

Farina—
Germany, 50 pks. J. Knill & Co.
France, 45 H. Ewald & Co.
Holland, 100 T. S. Tug and Light Co., Ld.

Glucose—
U. States, 500 pks. 520 cwts. Pearce, Pelly & Co.
Germany, 13 104 M. D. Co.
U. States, 1,750 2,500 R. G. Hall & Co.
" 100 634 Lipton, Ld.
" 300 300 C. Barnard
France, 249 249 W. E. Cole
" 249 249 Trier, Meyer & Co.

Glue—
France, £154 Mory & Co.
Germany, 76 M. Dk. Co.
" 320 Argo S. S. Co.
Belgium, 24 Leach & Co.
Italy, 300 T. J. & T. Powell
Germany, 21 H. Lambert
Belgium, 310 T. M. Duche & Sons
" 116 J. Harrison
Germany, 150 W. Harrison & Co.
Holland, 18 T. H. Lee

Glue Stock—
U. States, 81 bgs. Baxter, Schenkelberger & Co.
Germany, 95 bls. Hicks, Nash & Co.
France, 1 E. Flageollet & Co.
Belgium, 8 Leach & Co.
Sydney, 43 Hicks, Nash, & Co.
Brisbane, 27 T. J. & T. Powell

Glycerine—
Holland, £330 J. Barber & Co.
France, 360 J. W. Cook & Co., Ld.

Infusorial Earth—
Germany, £73 Snowdon, Sons & Co.

Iron Bromide—
Germany, 15 cks. A. & M. Zimmermann

Kainit—
Germany, 136 bgs. 360 t. F. W. Berk & Co., Ld.

Lead Acetate—
France, 12 cks. F. Smith
Germany, £22 Bullard, King & Co.

Litharge—
Holland, 8 pks. J. Owen

Lithopone White—
Germany, 40 pks. O'Hara & Hoar
France, 50 T. H. Lee
Germany, 20 Taylor Brs.

Methyl Alcohol—
U. States, 39 dms. H. Wallace & Co.

Mica—
E Indies, £15 W M. Smith & Sons
Germany, 75 "
U. States, 9 H. Ewald & Co.

Molasses—
U. States, 11 brls. 30 c. Davies, Turner, & Co.

Ochre—
U. States, 144 pks. Corticine Floor Covering Co.
Holland, 20 Phillipps & Graves
France, 22 Beck & Pollitzer
" 4 City Coml. Wf., Ld.
" 8 L. & I. D. Jt. Co.

Paraffin Scale—
U. States, 6,768 brls. Anglo-American Oil Co.

Paraffin Wax—
U. States, 898 cs. Anglo-American Oil Co.

Phosphate of Lime—
Belgium, 195 t. West & Penrose

Phosphate Rock—
U. States, 1,741 t. West & Penrose
D. W. I., 340 G. M. Bauer

Pitch—
Germany, 66 cks. L. & I. D. Jt. Co.
B. W. I., 9 brls. G. M. Bauer

Plumbago—
U. States, 9 pks. Lunham & Moore
Japan, 20 brls. Marshall & French

Potash—
France, 30 dms. Lon & Til. Ltge. C. & D. Co.

Potassium Carbonate—
France, 120 c. Petri Brs.
" 70 J. A. Reid
Germany, 10 R. W. Greeff & Co.
" 34 Petri Brs.

Potassium Chloride—
Germany, 508 bgs. Anglo-Contl. Guano Works

Potassium Oxalate—
Holland, 20 kgs. R. W. Greeff & Co.

Potassium Oxychloride—
Sweden, 142 kgs. G. Boor & Co.

Rosin—
U. States, 4,445 brls. Prod. Brokers' Co.
" 4,445 F. & S. Chiesman & Co.

Salicylic Acid—
Germany, 13 pks. Butler's Wf., Ld.

Saltpetre—
Germany, 7 cks. L. & I. D. Jt. Co.
" 2 R. W. Greeff & Co.
" 104 J. Hall & Son, Ld.
" 158 pks. P. Hecker & Co.
" 16 brls. "
Bengal, 1,673 bgs. Lucas & Spencer's Wf.

Soap—
U. States, £260 E. Fellingham
" 165 F. Claydon & Co.
" 425 Wilson & Co.
Belgium, 21 T. H. Lee

Soda—
Holland, 4 c. Hernu, Peron, & Co., Ld.

Soda Crystals—
Holland, 6 c. Little & Johnston

Sodium Hypochlorite—
Germany, 470 cs. H. Lambert

Sodium Prussiate—
Belgium, 14 cks. J. Owen

Starch—
Belgium, 170 pks. F. Claydon & Co.
" 140 Becker & Wagner
" 55 Leach & Co.
" 520 T. Ronaldson & Co.
Germany, 42 T. H. Lee
" 116 Argo S. S. Co.
" 560 E. & T. Pink
Holland, 2,110 Little & Johnston
" 25 Phillipps & Graves
" 620 A. Starck
" 31 Hernu, Peron, & Co., Ld.
" 10 Robinson, Roberts, & Co.
France, 30 W. E. Cole
U. States, 150 R. Bennett & Co.
" 150 C. Tennant, Sons, & Co.

Stearine—
Holland, 10 cks. J. Barber & Co.
" 1 Phillipps & Graves
" 51 bls. J. Owen
Belgium, 190 bgs. H. Hill & Sons
" 63 W. H. Mitchell
U. States, 9 cs. Lunham & Moore

Sulphur—
Italy, 50 t. G. Boor & Co.
" 10 A. F. White & Co.

Tar—
N. Russia, 96 brls. F. & S. Chiesman & Co.
" 68 cks. "
" 68 brls. Warrington & Co.
Norway, 6 cks. H. B. Alder & Co.

Tartaric Acid—
Belgium, 16 pks. R. W. Greeff & Co.

Turpentine—
France, 7 cks. Sollas & Sons
Russia, 52 brls. F. & S. Chiesman & Co.

Ultramarine—
Germany, 34 pks. Steinhoff, Sons, & Co.
Holland, 20 Thames S. T. & L. Co., Ld.
Belgium, 10 W. Harrison & Co.

Varnish—
France, 5 pks. Mory & Co.
Belgium, 4 T. H. Lee
Germany, 21 Butler's Wf., Ld.
U. States, 11 Atlantic Transport Co.
" 20 J. R. Francis & Co.

Verdigris—
France, 4 cks. B. & F. Wf. Co., Ld.

White Lead—
Holland, 20 pks. J. R. Francis & Co.
" 20 Perkins & Homer
U. States, 50 M. Ashby, Ld.
Austria, 16 M. Dk. Co.
Germany, 38 Taylor Brs.
" 50 H. B. Alder & Co.
Belgium, 122 T. & W. Farmiloe, Ld.
" 22 Fleming's Oil & Chemical Co.

Wolfram Ore—
Sydney, 1 t. A. Gibbs & Sons

Wood Pulp—
Belgium, 252 pks. W. D. Cork
Sweden, 250 Tough & Henderson
" 1,600 Henderson, Craig, & Co.
" 150 Raby & Mather
Germany, 150 Tough & Henderson
" 15 Becker & Wagner
Norway, 2,370 Johnsen & Jorgensen
" 3,800 London Paper Mills Co
U. States, 109 B. S. Lloyd & Co.
Canada, 679 A. E. Reed & Co.
" 1,629 Furness, Withy, & Co., Ld.

Zinc Oxide—
Holland, 65 pks. M. Ashby, Ld.
" 16 J. Barber & Co.
" 54 J. Matton
U. States, 450 M. Ashby, Ld.

LIVERPOOL.

Week ending January 12th.

Acetic Acid—
Rotterdam, 29 blns.

Aniline Salts—
Rotterdam, 5 cks.

Barytes—
Rotterdam, 22 cks.

Bone Meal—
B. Ayres, 486 bgs.

Bones—
Sidon, 182 bgs.
Valparaiso, 135 sks. Pacific S. N. Co.
" 156 bgs.
B. Ayes, 105

Borate of Lime—
Antofagasta 9,572 bgs. Pac. B. & R. C. Wks.
Mollendo, 4,149 sks.

Colours—
Hamburg, 2 cs.
Rotterdam, 7 cks.

Cottonseed Oil—
Savannah, 5 brls.

Dyestuffs—
Alizarine
Rotterdam, 4 brls.
Argols
Bordeaux, 49 cks.
Extracts
New York, 200 brls. T. Ellin & Co.
Hamburg, 40 bgs.
Bordeaux, 200 cks.
Fustic
Cartagena, 330 pcs. H. Evermann
Gambier
Singapore, 936 bgs.
Orchella
Hamburg, 8 bls. Browne, Geveke & Co.
Valonia
Smyrna, 1,574 kntls. G. Essayan & Co.
" 2,000 1,382 bgs 48¼ t.

Glue—
Nantes, 24 pks.
Boston, 9 cs.
St. Nazaire, 20 cks.
Rotterdam, 200 bgs.

Guano—
B. Ayes, 535 bgs.

Linseed Oil—
Batavia, 100 cs.

Litharge—
Hamburg, 1 ck.

Lithopone—
Rotterdam, 20 cks.

Manganese Ore—
Yokohama, 300 t.

Manure—
Batavia, 309 bls.

Paint—
Hamburg, 30 dms.
Boston, 16 cs.

Paraffin Scale—
New York, 7,235 brls. Thompson & Bedford
Rangoon, 80 bgs.

Phosphate Rock—
Pensacola, 576 t. Cie Central de Phosphates
Br'nsw'k, Ga., 1,854

Phosphates—
Ghent. 1,450 t.

Pyrites—
Huelva, 4,112 t. Matheson & Co.

Rosin—
Br'usw'k, Ga., 1,050 brls.

Rosin Oil—
Rotterdam, 25 brls.

Saltpetre—
Hamburg, 110 kgs.

Soap—
New York, 600 bxs. 63 crts.
Smyrna, 3 H. Vafea
Batavia, 1 cs.
N'port News, 200 brls.
Rotterdam, 8

Soap Stock—
Boston, 25 brls.
Galveston, 56

Soapstone—
Bordeaux, 300 bgs. Geo. G. Blackwell, Sons & Co.

Starch—
New York, 800 bgs.
Hamburg, 160 cs.
N port News, 500 sks.

Stearine—
Antwerp, 13 bgs. J. T. Fletcher & Co.
" 25

Tallow—
New York, 90 tcs. Colby & Co.
" 100 200 hds.
Boston, 100 J. McKee & Co.
" 650 25 hds. 200 brls.
" 292 Dove & Wilcox
B. Ayres, 742 cks.

Tar Salts—
Hamburg 4 cks.

Tartar—
Ancona, 4 cks.

Tartaric Acid—
Rotterdam, 10 cks.

Turpentine—
Savannah, 3,274 brls.
Bordeaux, 10 cks.

Ultramarine—
Bremen, 4 cks.
Hamburg, 4
Rotterdam, 20

Waste Salt—
Hamburg, 200 bgs.

White Lead—
Rotterdam, 75 cks.

Wood Pulp—
New York, 31 cs.
Halifax, 250 t. A. Rice & Co.
Rotterdam, 160 bls.

Zinc Oxide—
Antwerp, 40 brls.

Zinc White—
Hamburg, 80 cks.
Rotterdam, 40

MANCHESTER.

Week ending January 14th.

Acetic Acid—
Rotterdam, 20 brls.

Albumen—
Libau, 19 cs. W. H. Stot & Co.

Alizarine—
Rotterdam. 42 cks.
Aniline Salts—
Rotterdam, 13 cks.
Barytes—
Antwerp, 228 bgs.
Rotterdam, 24 cks.
Colours—
Antwerp, 8 cks 15 cs.
Rotterdam, 74 30 5 bxs.
Farina—
Stettin, 1,360 bgs. Browne, Geveke, & Co.
" 1,570
Glucose—
Newport News, 50 brls.
Stettin, 143
Glue—
Antwerp, 9 cks.
Rotterdam, 8 bgs.
Indigo—
Rotterdam, 6 chts.
Limestone—
Antwerp, 2 crts. J. T. Fletcher & Co.
Lithopone—
Rotterdam, 22 cks.
Oxalic Acid—
Rotterdam, 30 cks.
Rosin—
Savannah, 1,433 brls Smith & Forest
" 2,250
Starch—
Rotterdam, 130 cs.
Tartaric Acid—
Rotterdam, 7 cks.
Whiting—
Gothenburg, 100 bgs.
Wood Pulp—
Gothenburg, 4,062 bls. 35 pks.
Helgenas, 4,048
Zinc Oxide—
Antwerp, 6 brls.
Zinc White—
Rotterdam, 40 cks.

HULL.

Week ending January 14th.

Acids—
Hamburg, 8 cks. Wilson, Sons, & Co., Ld.
Ammonium Chloride—
Amsterdam, 1 ck. Hull & Netherlands S. S. Co.
Barytes—
Antwerp, 34 cks, 71 brls. Wilson, Sons, & Co., Ld.
Chemicals *(otherwise undescribed)*
Antwerp, 195 cks. 100 bgs. 65 pks. Wilson, Sons, & Co., Ld.
Bremen, 4 J. Pyefinch & Co.
Dunkirk, 76 Wilson, Sons, & Co., Ld.
Stettin, 10 cks. "
Colours—
Antwerp, 20 brls. 33 pks. 1 cs. Wilson, Sons, & Co., Ld.
" 2 cks. Sissons Brs. & Co.
Bremen, 2 pks. J. Pyefinch & Co.
Dunkirk, 1 ck. Wilson, Sons, & Co., Ld.
Rotterdam, 5 cks. 15 brls. 5 bxs. Hull & Netherlands S. S. Co.
Cream of Tartar—
Bordeaux, 9 cks.
Creosote Salts—
Rotterdam, 24 cks. Hull & Netherlands S. S. Co
Dextrine—
Harlingen, 10 bls. Hull & Netherlands S. S. Co.
Dyestuffs—
Alizarine
Rotterdam, 5 brls. Hull & Netherlands S. S. Co.
Extracts
Boston, 1 bx. Wilson, Sons, & Co.. Ld.
Rotterdam, 1 brl. Hull & Netherlands S. S. Co.
Myrabolams
Bombay, 2,526 bgs.
Dyestuffs *(otherwise undescribed)*
Antwerp, 906 bls.
Farina—
Harlingen, 100 bls. Hull & Netherlands S. S. Co.
Glucose—
New York, 550 brls.
Rotterdam, 160 bgs. Hull & Netherlands S. S. Co.
Glue—
Bremen, 20 bgs. Veltmann & Co.
Christiansand, 1 brl. Wilson, Sons, & Co., Ld.
Christiania, 100 bgs. "
Hamburg, 40 "
New York, 10 bxs. "
Rotterdam, 5 bgs. Hull & Netherlands S. S. Co.
Rouen, 9 cks.
Limestone—
Antwerp, 2 cs. Wilson, Sons, & Co., Ld.
Nickel Salts—
Rotterdam, 2 cks. Hull & Netherlands S. S. Co.
Ochre—
Bremen, 9 cks. Veltmann & Co.
Rouen, 47 Wilson, Sons, & Co., Ld.
Paint—
Christiania, 5 cs. Wilson, Sons, & Co., Ld.
Pitch—
Copenhagen, 30 brls. Wilson, Sons, & Co., Ld.
Rosin—
Bordeaux, 6 cks.
Saltpetre—
Antwerp, 5 cks. Wilson, Sons, & Co., Ld.
Soap—
Dunkirk, 1 cs. Wilson, Sons, & Co., Ld.
Soda—
Antwerp, 100 bgs. Wilson, Sons, & Co., Ld.
Sodium—
Boston, 60 brls. Wilson, Sons, & Co., Ld.
Sodium Nitrate—
Tocopilla, 10,714 bgs.
Starch—
Amsterdam, 80 cs. Hull & Netherlands S. S. Co.
Antwerp, 20 Bailey & Leetham, Ld.
Bremen, 1,293 Veltmann & Co.
Ghent, 72 Wilson, Sons. & Co., Ld.
Rotterdam, 32 Hull & Netherlands S. S. Co.
Stearine—
Antwerp, 6 bgs. Wilson, Sons, & Co., Ld.
New York, 25 hds.
Tallow—
Antwerp, 55 cks. Wilson, Sons, & Co., Ld.
Boston, 375 tcs. "
New York, 90 brls. "
Tar—
Boston, 1 brl. Wilson, Sons, & Co., Ld.
Ultramarine—
Antwerp, 6 cs. Wilson, Sons, & Co., Ld.
White Lead—
Amsterdam, 69 cks. Hull & Netherlands S. S. Co.
Rotterdam, 92 "
Wood Pulp—
Antwerp, 25 pks. Bailey & Sons & Co., Ld.
Christiania, 1,620 bls. 33 cs. Wilson, Sons, & Co., Ld.
Gothenburg, 466 pks. "
Hango, 72 bls.

GLASGOW.

Week ending January 19th.

Acetic Acid—
Rotterdam, 20 crbs. J. Rankine & Son
Alumina—
Rotterdam, 100 bgs. J. Rankine & Son
Arachide Oil—
Rotterdam, 2 cks. J. Rankine & Son
Asbestos—
St. John, N.B., 250 bgs.
Barytes—
Rotterdam, 131 cks. J. Rankine & Son
Hamburg, 14 cks. 150 bgs.
Chalk—
Antwerp, 20 bgs.
Colours—
Rotterdam, 114 brls. 11 cs. 1 bx. J. Rankine & Son
Boston,
Dyestuffs—
Alizarine
Rotterdam, 27 cks. 2 cs. J. Rankine & Son
Aniline
Amsterdam, 2 cks.
Rotterdam, 7 7 cs. J. Rankine & Son
Shumac
Palermo, 450 bgs.
Glucose—
Portland, M., 317 brls.
Glue—
New York, 6 crts.
Boston, 10 brls.
Antwerp, 7 cks.
Infusorial Earth—
Hamburg, 169 bgs.
Ochre—
New York, 65 kgs.
Oxalic Acid—
Rotterdam, 9 cks.
Paraffin Wax—
Rangoon, 483 bgs. 935 cs.
Philadelphia, 170 brls. 20
Phosphates—
Antwerp, 993 bgs.
Potash—
Hamburg, 80 cks.
Pyrites—
Huelva, 3,917 t. Tharsis Co.
Rosin—
Pensacola, 3,598 brls. W. N. Gemmill & Co.
Soap—
Philadelphia, 600 bxs. 38 crts.
Soda—
Rotterdam, 10 cks. J. Rankine & Son
Starch—
New York, 400 bgs.
Portland, M., 650
Rotterdam 13 cs. J. Rankine & Son
Boston, 125
Antwerp, 20 100 cs.
Stearine—
New York, 25 tcs.
Talc—
New York, 198 bgs.
Tallow—
Philadelphia, 222 tcs.
Tar—
Marseilles, 24 brls.
Turpentine—
Pensacola, 1,000 brls. J. & A. Hamilton
Ultramarine—
Rotterdam, 4 cks. 2 cs. J. Rankine & Son
Antwerp, 11
Varnish—
New York, 21 brls.
White Lead—
Rotterdam, 50 cks. J. Rankine & Son

TYNE.

Week ending January 14th.

Antimony—
Hamburg, 100 cs. Tyne S. S. Co.
Asbestos—
Hamburg, 48 bgs. Tyne S. S. Co.
Castor Oil—
Antwerp, 28 brls.
Colours—
Antwerp, 1 brl.
Limestone—
Antwerp, 11 crts. Tyne S. S. Co.
Manganese—
Hamburg, 10 cs. Tyne S. S. Co.
Manganese Ore—
Port Pirie, 2,094 t. 7 c.
Paraffin Scale—
New York, 1,082 pks C. Hassell & Son
Potash—
Antwerp, 1 brl.
Pyrites—
Huelva, 3,102 t. Tharsis Sulphur & Copper Co.
Salt—
Hamburg, 185 t. Clephans & Wiencke
" 300 (about)
Waste Salt—
Hamburg, 200 bgs. Tyne S. S. Co.
White Lead—
Antwerp, 20 brls.
Rotterdam, 11 cks. Tyne S. S. Co.
Wood Pulp—
Christiania 20 cs. 80 bls.
Risor, 94

GOOLE.

Week ending January 11th.

Alizarine—
Rotterdam, 84 cks. 3 cs.
Aniline—
Rotterdam, 291 cks. 42 cs.
Anthracene—
Boulogne, 9 cks.
Antimony—
Boulogne, 5 cks.
Caoutchouc—
Boulogne, 11 cks.
Chemicals *(otherwise undescribed)*
Rotterdam, 12 cks.
Colours—
Hamburg, 22 cks. 1 cs.
Dyestuffs *(otherwise undes.)—*
Boulogne, 92 cks. 28 pks.
Ghent, 116 bgs.
Farina—
Hamburg, 500 bgs.
Glucose—
Calais, 103 bgs.
Hamburg, 20 cks.
Glue—
Boulogne, 3 cks. 1 ble.
Logwood—
Belize, 540 t.
Hamburg, 27
Ochre—
Calais, 36 cks.
Dunkirk, 76
Phosphates—
Dunkirk, 2,400 bgs.
Ghent, 1,610
Potash—
Calais, 8 dms
Pyrites—
Huelva, 963 t.
Seville, 1,175
Saltpetre—
Antwerp, 85 bgs.
Hamburg, 62 cks.
Rotterdam, 70 bgs.
Sodium Nitrate—
Dunkirk, 286 bgs.
Ultramarine—
Rotterdam, 1 ck.

GRIMSBY.

Week ending January 14th.

Caoutchouc—
Antwerp, 1 cs.
Hamburg, 3
Chemicals *(otherwise undescribed)*
Hamburg, 1 crby.
Colours—
Antwerp, 1 ck. 90 pks.
Hamburg, 36 3 cs. 130
Rotterdam, 100 bgs. 3 cks. 2
Dyestuffs *(otherwise undescribed)*
Dieppe, 20 cks.
Farina—
Hamburg, 100 bgs.
Indigo—
Rotterdam, 5 chts.
Saltpetre—
Hamburg, 100 bgs.

EXPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending January 18th.

Acids—
E. London, 15 cs. £11
Cape Town, 16 pks. 34

Alkali—
Lyttelton, 3 t. 12 c. £20

Alum Waste—
Calcutta, 40 t. 10 c. £99

Ammonia—
Hankow, 4 c. £11
Bluff, 2 t 9 210
Trinidad, 2 12
Pt. Elizabeth, 10 cs. 15

Ammonium Carbonate—
Antwerp, 1 t. £32
Dunkirk, 1 10 c. 38
New York, 25 cks. 170

Ammonium Chloride—
Mersyne, 4 c. £75
E. London, 6 cks. 10
Melbourne, 2 t. 38
Samsoun, 1 33
New York, 7 134

Ammonium Sulphate—
Hamburg, 120 t. 4 c. £1,246
Antwerp, 129 5 1,373
Colombo, 10 110
Ghent, 150 10 1,538
Canaria, 50 502
Demerara, 120 1 1,230
Bremen, 320 3,351
Martinique, 74 4 761

Bleaching Powder—
Durban, 3 t. £26

Bone Ash—
Melbourne, 10 c. £25

Borax—
Delagoa Bay, 20 cs. £42
Auckland, 1 t. 40
Stettin, 10 c. 10
Durban, 1 41

Carbonic Acid Gas—
Channel Is., 72 tubes £27

Caustic Potash—
Lyttelton, 2 t. 4 c. £50

Caustic Soda—
E. London, 2 t. £36
Durban, 7 c. 7
Cape Town, 12 21

Chemicals (*otherwise undescribed*)
Calcutta, 5 kgs. 4 cs. £66
E. London, 15 10 13
Otago, 4 17
Bombay, 4 crts. 28 12 dms. 149
Dunedin, 16 cks. 7 pks. 79
Hamburg, 1 30 307
Karachi, 7 3 45
Havre, 5 cks. 25
Brussels, 5 kgs. 2 55
Gothenburg 4 25
Cologne, 8 47
Genoa, 10 58
Leghorn, 8 30
Rockhampton, 5 11
New York, 5 27 87
Paris, 22 15
Perth, 31 pks (pt.) 35
Melb'rne, 95 / 100 kgs. 309
Madras, 14 12
Adelaide, 7 cs. (pt.) 15
Sydney, 24 pks. 88
Amsterdam, 23 18

Citric Acid—
Trinidad, 1 brl. £6
Bermuda, 1 c. 8
Lisbon, 10 57
E. London, 2 cks. 12
Amsterdam, 1 25
Durban, 3 2
Adelaide, 3 17

Coal Products—
Alizarine
Boston, 40 cks. £444
Lisbon, 6 pks. 65
Reval, 6 cs. 280
Aniline
Sydney, 1 cs. £2
Cape T., 1 18
Melbourne, 1 13

Aniline Oil
Genoa, 10 dms. £260
New York, 13 318
Aniline Salts
Genoa, 20 cks. £110
Carbolic Acid
Melbourne, 2 cs. £12
Rotterdam, 25 cks. 114
Creosote
St. Malo, 22,400 galls. £213
Gibraltar, 20 brls. 19
New York, 500 cks. 353
Creosote Oil
Trinidad, 55 cks. £44
Dyes
Boulogne, 3 cks. 1 cs. £26
Boston, 6 pks. 52
Lyttelton, 10 173
Naphtha
Auckland, 40 dms. £20
Nitro Naphthaline
Dantzig, 9 cks. £50
Pitch
Rotterdam, 1,085 brls. £959
Melbourne, 2 bxs. 23 13
Naples, 1 541 t. 1,900
Antwerp, 2,327 2,812
Dunkirk, 275 350
Malta, 100 cks. 39
Gothenburg, 50 26
Alexandria, 400 144
Hamburg, 41 128
Sydney, 10 5
Cette, qty. 1,825
Pyridine
Mannheim, 12 cks. £125
Antwerp, 2 dms. 34
Pyridine Bases
Rotterdam, 24 cks. £242
Tar
Delagoa Bay, 50 dms. £6
Durban, 155 20
Hamburg, 250 brls. 98
Melbourne, 30 rnlts. 34
Gothenburg, 100 cks. 63
Christiania, 60 frkns. 21
Sydney, 100 19
Tar Oil
Gothenburg, 30 cks. £26

Coal Products (*otherwise undes.*)—
Antwerp, 150 t. £209
Cape Town, 150 dms. 7
Sydney, 20 7

Copper Sulphate—
Paris, 5 t. £88
Pt. Elizabeth, 7 c. 7

Cream of Tartar—
Pt. Chalmers, 1 t. 10 c. £116
Auckland, 1 10 122
Fremantle, 1 75
Napier, 5 19
Durban 5 35
Adelaide, 5 19

Disinfectants—
Rio de Janeiro 17 c £7
Colombo, 50 cks. 76 pks. 172
Pt. Elizabeth, 40 14
Bombay, 41 14
Malta, 3 cs 10
Sydney, 6 16

Guano (Nitro)—
Jersey, 95 t £665

Lime Salts—
Brussels, 1 c. £24

Manure—
Pt. Chalmers, 1 t. £8
Guernsey, 1 1 c. 10
Jamaica, 15 5 160
Jersey, 141 4 956
Landerneau 187 6 980
Martinique, 5 10 150
Malaga, 75 12 135
Adelaide, 13 67
Trinidad, 2 54
Penang, 273 2,049
Demerara, 20 154
Pontrieux, 96 400
Lisbon, 4 2 14
Morlaix, 135 800

Mercuric Chloride—
Calcutta, 8 c. £94
Salonica, 8 56

Nitric Acid—
Channel Is., 28 crbys. £49

Potassium Bichromate—
Pt. Elizabeth, 1 cs. £8
Lyttelton, 15 c. 26

Potassium Chlorate—
Christchurch, 7 c £13
Durban, 3 5

Potassium Cyanide—
Sydney, 4 t 10 c. £486
Delagoa Bay, 30 50 cs. 3 411
Melbourne, 8 871
Auckland, 3 12 336
New York, 60 617
Townsville, 15 1,760
Durban, 3 322

Saltpetre—
Rio de Janeiro, 4 t. 7 c. £97
Savanilla, 2 11 53
Durban, 11 11
Dunedin, 1 21
Sydney, 4 91
Boston, 5 102
Newport News, 13 16 284

Sheep Dip—
Dunedin, 3 t. 2 c. £129
Pt. Elizabeth, 4 8 175
B. Ayres, 5 1 200
Delagoa Bay, 100 dms. 90
Jamaica, 40 15
Cape Town, 1,000 pks 120

Soda—
Cape Town, 6 c £5

Soda Crystals—
Cape Town, 2 t. 10 c. £9

Soda Salts—
Brussels, 1 c. £20

Sodium Carbonate—
Durban, 1 t. £21

Sulphur—
E. London, 25 cks. 40 kgs. £36

Superphosphates—
Canaria, 23 t. £86

Tartaric Acid—
Dunedin, 3 c. £17
Auckland, 4 22
Pt. Elizabeth, 7 47
Cape Town, 2 11
Melbourne, 1 t. 108
Durban, 3 16

LIVERPOOL.

Week ending January 18th.

Acetate of Lime—
Santos, 8 c. 1 q. £4

Acetic Acid—
Lisbon, 5 brls. £9
Rio de Janeiro, 4 t. 9 c 51
Vera Cruz, 1 6 3 q. 27

Alkali—
Lisbon, 7 t. 1 q £30
Vigo, 5 10 c. 2 23
Malta, 5 2 1 20
Salonica, 4 19 1 20
Coloniata, 6 2 3 25
Cavalla, 2 15 1 11
Seville, 15 6 6
Mauritius, 18 1 4
Catania, 10 17 42
Genoa, 75 340
Adelaide, 8 36

Alum—
Talcahuano, 5 t. 13 c. 3 q. £27
Santos, 5 2
Rangoon, 2 19 3 17
Oporto, 6 1 28
Piræus, 10 13 50

Alum Cake—
Bilbao, 5 t. 4 c. £16

Aluminoferric—
Halifax, 3 t. 14 c. 3 q. £11

Aluminous Cake—
Melbourne, 6 t. 16 c. 2 q. £43
Calcutta, 35 7 1 120

Ammonium Carbonate—
Ancona, 10 c 3 q. £13
Valparaiso, 8 3 19
Genoa, 2 2 33
Venice, 18 24
Talcahuano, 5 7

Ammonium Chloride—
Saloara, 4 c. £7
Salonica, 2 t 2 65
Rotterdam, 5 7 84
Genoa, 11 2 q. 17
Constantinople, 2 10 77
Philadelphia, 5 1 3 130
Melbourne, 1 1 18
Bilbao, 1 22

Ammonium Sulphate—
Valencia, 171 t 16 c. 1 q. £1,622
Amsterdam, 10 8
Venice, 20 200
Genoa, 11 10 3 123
Almeria, 103 5 1,032
Tarragona, 5 45
New York, 101 1 1,053
Cullera, 162 10 1,695
Philadelphia, 50 11 1 530
Lisbon, 10 7 102

Basic Slag—
Demerara, 40 t. £98
Oporto, 30 62

Bisulphite of Lime—
Rangoon, 2 t. 10 c. £77

Bleaching Powder—
Boston, 477 cks.
Chicago, 20 cs.
Genoa, 140
Gothenburg, 38
Halifax, 5
Johannesburg, 98
Lachute, 22
Leghorn, 45
Lisbon, 143
Lockhaven, 62
Melbourne, 7
Michigan, 25
Milwaukee 147
Naples, 27
New York, 300 43 dms.
Oporto, 91
Philadelphia, 169
Portland, M., 100
Pt. Natal, 23
Rio de Janeiro, 12
Rouen, 199
Sydney, 88
Vercille, 80
Vigo, 6

Borax—
Vera Cruz, 2 t. 10 c. £19
Antwerp, 1 19 2 q. 32
Berlin, 10 17 1 17 4
Maastricht, 18 17 30 1
Hankow, 4 5 2
Copenhagen, 11 16
Natal, 2 4 4

Calcium Carbide—
Hong Kong, 13 c. 2 q. £13

Calcium Chloride—
Genoa, 13 t. 18 c. £31
Hong Hong, 7 16 30

Carbolic Acid—
Genoa, 9 c. 3 q. £32
Odessa, 6 2 23
Hamburg, 10 t. 15 3 630

Caustic Potash—
B Ayres, 15 c. 3 q. £8
Chicago, 1 t. 3 31

Caustic Soda—
Alexandria, 50 dms.
Antwerp, 39
Barcelona, 200 65 cks.
Barranquilla, 20
Boston, 60 brls.
B. Ayres, 60
Chicago, 55 pks
Copenhagen, 5
Corunna, 12
Genoa, 379
Hamburg, 36
Havre, 70
Hiogo, 69
Hong Kong, 71
Kavalla, 4
Kingston, Ja., 7
Leghorn, 6
Melbourne, 136
Messina, 20
Nagasaki, 150
Naples, 21

New York, 87 100
Oporto, 95
Philadelphia, 50
Piræus, 382
Rio de Janeiro, 108
Rotterdam, 65
Salonica, 29
Santos, 10
Sarina, 35
Seville, 16
Sydney, 25
Talcahuano, 25
Toronto, 35
Trieste, 30
Valencia, 10
Valparaiso, 50
Vera Cruz, 142

Chemicals *(otherwise undescribed)*
Natal, 2 t. 5 c. £35
Melbourne, 1 12 7
Gothenburg, 10 16
Johannesburg, 3 320

China Clay—
Baltimore, 490 t. 1,054 cks.
Barcelona, 12
Boston, 1,782
Calcutta, 140
Genoa, 40 bgs.
Vera Cruz, 50

Coal Products—
Aniline Salts
Alexandretta, 50 kgs. 20 brls.
Boston, 30 cs.
Madras, 5 cks.
Smyrna, 15 brls.
Syra, 2
Creosote Oil
Bordeaux, 20 cocks. 250 brls.
Dyes
Barcelona, 10 cks.
Calcutta, 2 cs.
Pitch
Lagos, 10 brls.
Talcahuano, 100
Tar
Bilbao, 4 cks.
Hamburg, 125 brls.
Lagos, 10
Philadelphia, 65
Tar Oil
Madras, 222 brls.

Copperas—
Piræus, 3 t. 1 c. 3 q. £6

Copper Sulphate—
Piræus, 5 t. 8 c. 3 q. £1 8
Rio de Janeiro, 5 1 5
Bordeaux, 313 1 1,584
Ancona, 13 17 2 254
Genoa, 20 2 2 330
Catania, 22 13 327
Palermo, 15 3 253
Leghorn, 6 2 96
Naples, 18 17 1 322
Lisbon, 2 15 51
Bone, 5 2 3 88
Algiers, 6 105
Bari, 22 16 3 389
Calcutta, 2 10 42
Valparaiso, 2 5 36
Smyrna, 5 1 5
Cette, 193 12 2 3,688
Sourabaya, 3 15 65
Batoum, 35 3 585
Odessa, 10 167
Nantes, 18 3 2 357

Dried Blood—
Mauritius, 14 t. £118

Dyestuffs—
Aniline Colours
Barcelona, 3 kgs. 2 cs.
Montreal, 1
New York, 2 1 21 cks. 2 brls.
Extracts
Antwerp, 4 cks.
Barcelona, 50 20 cs.
New York, 25
Sydney, 5
Indigo
New York, 3 cks.
Logwood
Gothenburg, 20 cs.

Dyestuffs *(otherwise unaescribed)*
New York, 12 cks.
Rio de Janeiro, 4 kgs.

Glycerine—
Rotterdam, 19 t. 16 c. 2q. £1,060
Piræus, 4 19 3 265
Adelaide, 2 110
Rio de Janeiro, 5 2 9
Shanghai, 8 5 39
Punta Arenas, 15 3 50
Karachi, 3 5
Vera Cruz, 2 10 3 89

Guano—
Las Palmas, 10 t. £49

Lead Acetate—
Rio de Janeiro, 6 c. £8
Santos, 7 3 q. 15

Lead Nitrate—
Rio de Janeiro, 10 c. £11

Magnesia—
Bordeaux, 10 cs.
Paris, 112

Magnesium Sulphate—
Rio de Janeiro, 200 kgs.

Manganese Ore—
Newport News, 24 cks.

Manganese Oxide—
Antwerp, 12 c. £7

Manure—
Malaga, 10 t. £75
B. Ayres, 1 12 c. 3 q 52

Oxalic Acid—
Ancona, 2 c. £8
Philadelphia, 3 t. 11 94
Boston, 8 16 242
Syme, 6 2 q. 10
Vera Cruz, 8 1 13

Paint—
Barranquilla, 150 kgs.
B. Ayres, 12 cks.
Chephalonia, 2
Constantinople, 369
Halifax, 30 dms.
Havana, 1 cks.
Jeremie, 2
Kingston, Ja., 3
Lisbon, 37 pks.
Madrid, 6 bxs.
Malta, 2 cs. 7 cks.
Manaos, 1 4
Maracaibo, 40
Matanzas, 2
Nassau, 75 7
New York, 50 brls.
Neuvitas, 6
Para, 1
Pernambuco, 50
Pt. Natal, 746 pks.
Reval, 46 cks.
Rio de Janeiro, 2
Salonica, 4
Santiago, 4
Sydney, 200
Tahati, 14
Tampico, 5
Truro, 2 1 cs.
Tumaco, 44 pks.

Painters' Colours—
Calcutta, 38 pks.
Hong Kong, 20 cks.
Las Palmas 1 bbl.
Manila, 1 1

Paraffin Wax—
Barcelona, 50 bgs.
Genoa, 125
Leghorn, 160
Mitylene, 5

Pearl Ash—
New York, 9 t. 2 c. £36

Phosphorus—
St. John's, N.B., 3 c. £37

Picric Acid—
New York, 1 t. £86

Potassium Bichromate—
Barcelona, 1 t. £32
Malaga, 3 8 c. 1 q. 110
Rio de Janeiro, 14 22
Smyrna, 1 11 84
Sydney, 1 3 11
Tampico, 1 42

Potassium Carbonate—
Chicago, 11 c. £11

Potassium Chlorate—
Genoa, 10 c. £15
Hiogo, 40 t. 1,222
Hong Kong, 1 30
Naples, 4 5 125
Odessa, 2 60
Osaki, 3 90
Tampico, 1 30
Valleyfield, 5 145
Venice, 10 15
Vera Cruz, 1 30

Salt—
Antwerp, 215 t.
Baltimore, 100
Barbadoes, 391 13 c.
Boston, 150
Brussels, 150 cs.
Buenaventura, 100
Calcutta, 4,138
Cape Lahou, 5
Chicago, 230
Conakry, 93
Copenhagen, 62
Dubreka, 50 11 c.
Gd. Bassa, 6 8
Gd. Lahou, 7 10
Harlingen, 426
Havana, 159 5
Ghent, 85
Lagos, 55
Landana, 29 16
Manoh, 26 15
Melbourne, 46 12
M. Video, 50 cs.
Montreal, 150
New York, 136
Para, 31 5 c.
Portland, Me., 100
Pt. Natal, 168 6
Rouen, 10
Shanghai, 1 12
Sierra Leone, 150 12
Sulymah, 26 15
Trinidad, 109
Valparaiso, 146 19
Wenersburg, 10
Winnebah, 14 15

Salt Cake—
Antwerp, 120 t. £155
Baltimore, 91 16 c. 153
Barranquilla, 5 15 26
Lisbon, 30 49
Philadelphia, 25 5 41

Saltpetre—
Cabedello, 1 t. 10 c. £39

Sheep Dip—
M. Video, 8 t. 18 c. 1 q. £250
Punta Arenas, 1 17 100

Soap—
Accra, 100 bxs.
Antigua, 61
Antwerp, 100
Bayin, 100
Bombay, 760 70 cs. 75 bdls.
Buenaventura, 10
Calcutta, 56 500
Cape Town, 1,100 33
Caracas, 1
Cartagena, N.G., 2
Colon, 550
Conakry, 315
Copenhagen, 351
Curaçao, 191
Dominica, 20
Dunedin, 1 tnk.
E. London, 1,600 120
Fresco, 50
Ghent, 200
Gibraltar, 54
Gd. Bassa, 30
Grenada 40
Guadeloupe, 500 bdls.
Havana, 150 12
Johannesburg, 50
Kingston, Jam., 1,659
Kurrachee, 607
Lagos, 435 10
Lanzarote, 30
Lisbon, 1
Macassar, 500
Madras, 20
Manaos, 750
Mauritius, 4,550
Monrovia, 80
Montserrat, 80
New York, 50
Para, 951
Pt. Louis, 200
Pt. Natal, 15 brls. 625 cs. 80 dms.
Quebec, 2
Rama, 125
Rangoon, 50
Rotterdam, 494
St. John's, 611
St. Lucia 290
St. Thomas, 700
San Juan, 490
Santos, 3
Secondee, 20
Shanghai, 12,925
Sierra Leone, 62
Singapore, 2,667
Sydney, 20
Talcahuano, 10
Tientsin, 200
Tongshan, 10 brls.
Trinidad, 600 800 cs.
Valparaiso, 100
Warri, 150

Soap Lyes—
Rotterdam, 55 dms.

Soda Ash—
Antwerp, 1,550 bgs
Baltimore, 18 cks.
Barranquilla, 100 cs.
Batavia, 30 brls.
Boston, 200 32 tcs. 99
B. Ayres, 145
Calcutta, 250 kgs. 6
Callao, 10
Deftshaven, 400 bgs.
Hiogo, 597
Johannesburg, 80 kgs.
Leghorn, 100 bgs.
Mexico City, 60
Mombassa, 10
Monterey, 17
N. Orleans, 39
New York, 95
Philadelphia, 280 32
Piræus, 50 brls.
Reinosa, 15
Rio de Janeiro, 70
Rio Grande, 50
Rotterdam, 19
St. Stephen, 80
Shiedam, 837
Smyrna, 400
Sydney, 111
Toronto, 29
Turin, 100
Venice, 200
Vera Cruz, 20
Volo, 18
Windsor Mills, 320
Yokohama, 200
Zanzibar, 10

Soda Crystals—
Ancona, 56 brls.
B. Ayres, 200 kgs.
Calcutta, 1
Oporto, 25
Piræus, 20

Sodium Arseniate—
Rio de Janeiro 12 cks.

Sodium Bicarbonate—
Alexandretta, 10 brls.
Algoa Bay, 100 bgs.
Amsterdam, 70 kgs.
Antwerp, 10 cks.
Barbadoes, 20
Barcelona, 75
Bombay, 435
Bordeaux, 350 pks.
Bourgas, 40
B. Ayres, 34 18 cks.
Calcutta, 452
E. London, 100 bgs.
Genoa, 10 t. 2 c.
Gijon, 10 kgs.
Johannesburg, 75
Kurrachee, 100 273 pks. 100 b s.
Melbourne, 337
Odessa, 200
Penang, 112 s.
Pt. Limon, 20
Rouen, 750
St. John's, 35
Salonica, 40
Santander, 50
Singapore, 12 cks.
Sydney, 50 15
Trinidad, 20
Varna, 20

Sodium Bichromate—
Barcelona, 2 cks.

Sodium Bisulphite—
Almonte, 8 cks.

Sodium Carbonate—
Boston, 84 brls.
New York, 70

Sodium Chlorate—
Hamburg 10 kgs.
New York, 200
Philadelphia, 50

Sodium Hyposulphite—
San Francisco, 250 kgs.

Sodium Oxide—
Leghorn, 5 cs.

Sodium Silicate—
Kingston, Jam., 8 brls.

Sodium Stannate—
Rio de Janeiro, 2 cks.

Starch—
Antwerp, 2 brls.
Barcelona, 80 sks.
Copenhagen, 5 cs.

Sulphur—
B. Ayres, 2 t. 10 c. £
Boston, 50 2 2
Cabedello, 1
Cienfuegos, 16
Havana, 8 1 q.
Tampico, 1 16
Trinidad, 5 14

Sulphuric Acid—
Pernambuco, 16 c. £

Superphosphates—
Cullera, 100 t. 7 c. £310
Genoa, 280 18 2 q. 578
Nantes, 245 16 1 609
Oporto, 20 48
Valencia, 83 1 183
Tin Salts—
Vera Cruz, 4 c. 2 q. £12
Varnish—
Campana, 77 cs.
C. C. Castle, 2
Cartagena, N.G., 8
Dunedin, 6
Genoa, 8 cks.
Havana, 1
Huelva, 2
Lisbon, 2 dms.
Pernambuco, 40
Portland, Me., 760
Rio de Janeiro, 32
Rotterdam, 6
White Lead—
E. London, 30 kgs.

MANCHESTER.

Week ending January 18th.

Alum—
Bussorah, 5 brls.
Aniline Colours—
Germany, 12 kgs. 1 cs.
Carbolic Acid—
France, 1 cs.
Coal Products—
Aniline Oil
Belgium, 4 dms.
Aniline Salts
Belgium, 5 cks.
Beta Naphthol
Belgium, 4 cks.
Naphthylamine
Switzerland, 28 cks.
Pitch
Belgium, 31 t. 16 c.
Cette, 1,594 15
Pyridine
Switzerland, 5 dms.
Tar
Aden, 20 brls.
Toluidine Salts
Germany, 1 brl.
Toluol
Germany, 20 dms.
Copperas—
Bussorah, 30 brls.
Disinfectants—
Bombay, 25 cks.
Dyestuffs *(otherwise undescribed)*
Boston, 1 kg. 12 cs. 13 dms.
Farina—
Bombay, 10 bgs.
France, 10
Holland, 40 sks.
Glue—
Belgium, 6 cks.
Bombay, 1
Holland, 24
Lead Chloride—
Germany, 2 cks
Oxalic Acid—
Bushire, 4 cs.
Potassium Bichromate—
Bushire, 8 cs.
Potassium Chlorate—
France, 4 cks.
Salt—
France, 10 bgs.
Soap—
Bombay, 4 bxs. / 2 cks. 3 cs.
Boston, 25
Sodium Arseniate—
France, 3 brls.
Sodium Naphthionate—
Germany, 15 cks.
Starch—
Bombay, 6 cks.
Tartar Emetic—
France, 2 cks.
Zinc Chloride—
Holland, 20 cks.

HULL.

Week ending January 14th.

Ammonium Sulphate—
Antwerp, 500 bgs.
Stettin, 1,000

Bleaching Powder—
Fiume, 20 cks.
Chemicals *(otherwise undescribed)*
Christiania, 2 cks. 1,136 slbs. / 20 cs. 20 pks.
Copenhagen, 15
Drontheim, 10
Dunkirk, 2
Ghent, 4
Gothenburg, 27 8
Hamburg, 15
Rotterdam, 22 40
Colours—
Fiume, 3 cks.
Cottonseed Oil—
Amsterdam, 401 c.
Antwerp, 290
Catania, 4
Christiania, 25
Copenhagen, 100
Drontheim, 86
Dunkirk, 303
Hamburg, 359
Rotterdam, 2,557
Rouen, 421
Stettin, 607
Trieste, 488
Dyestuffs *(otherwise undescribed)*
Boston, 7 cks.
Guano—
Dunkirk, 1,000 sks.
Linseed Oil—
Antwerp, 21 c.
Bergen, 7
Boston, 117
Christiania, 71
Drontheim, 18
Hamburg, 212
New York, 179
Manure—
Venice, 40 t.
Paint—
Antwerp, 7 cks.
Ghent, 1 cs.
Painters' Colours—
Amsterdam, 13 cks. 12 dms.
Antwerp, 2 7 cs.
Boston, 104 33 pks.
Copenhagen, 2 1 6
Dunkirk, 2
Ghent, 4
Gothenburg, 17 dms.
Hamburg, 23 3
Rotterdam, 12
Rouen, 2
Stavanger, 1
Trieste, 1
Pitch—
Antwerp, 172 t.
Dunkirk, 351
Soap—
Amsterdam, 41 cs.
Drontheim, 10
Rouen, 10
Starch—
Riga, 25 cs.
Sulphur—
Venice, 300 bgs.
Tallow—
Amsterdam, 1 ck.
Gothenburg, 5
Konigsberg, 405
Tar—
Helsingfors, 1 ck.
Rotterdam, 7
Turpentine—
Christiania, 2 cks.
Helsingfors, 2 cs.
Varnish—
Amsterdam, 2 cs.
Boston, 7 cks.
Gothenburg, 2
Hamburg, 1
Helsingfors, 2
Stettin, 2

GLASGOW.

Week ending January 19th.

Alum—
Melbourne, £22
Ammonium Sulphate—
Bombay, 22 t. 18½ c.
Colombo, 17 5¼
Hamburg, 50 11
Italy, 152 9
Asbestos—
Bombay, £24
Penang, 84
Tongkin, 82

Bleaching Powder—
Calcutta, 65 t. 4 c.
Bones—
Antwerp, £80
Boracic Acid—
Melbourne, £49
Borax—
Melbourne, £52 14s.
Castor Oil—
Adelaide, £21
Caustic Soda—
Paris, 33 t. ¾ c.
Chemicals *(otherwise undescribed)*
Brisbane, £135 15s.
Coal Products—
Creosote Oil
Boston, £125
Pitch
Bombay, £46
Cette, 1,707 t. 1 c.
Karachi, 20
Tar
Bombay, £170 10s.
Calcutta, 243 18
Russia, 25
Copperas—
Bombay, £144
Calcutta, 43 t. 18 c.
Karachi, 40
Dextrine—
Italy, £120
Extracts—
Belgium, £48 8s.
Melbourne, £50
Farina—
Antwerp, £35
Gelatine—
Philadelphia, £500
Kainit—
Sydney, £25
Linseed Oil—
Mauritius, 2 t. 14½ c.
Melbourne, 1 14¾
Magnesia—
Adelaide, £21
Manganese—
Antwerp, £105
Manganese (Recovered)—
Rotterdam, £120
Naphtha—
Rotterdam, £59
Nitric Acid—
Madras, £40
Paint—
Manzanilla, £36
Painters' Colours—
Adelaide, £54 19s.
Bangkok, 187
Bombay, 186 19
Boston, 164
Brisbane, 69
Cape Town, 161
Colombo, 42 10
Hong Kong, £70
Mauritius, 166
Melbourne, 242
Rotterdam, 7
Singapore, 62
Paraffin Wax—
Christiania, £100
Rotterdam, 6
Russia, 900
Turkey, 70
Potassium Bichromate—
Adelaide, £30
Amsterdam, 30
Antwerp, 34
Ghent, 25
Madras, 62
Paris, 76
Rotterdam, 112
Rouen, 170
Potassium Cyanide—
Melbourne, £330
Potassium Prussiate—
Italy, £65
Soap—
Bombay, 3 t. 7¾ c.
Queenstown, 5
Sodium Bichromate—
Ghent, 4 t. 8½ c.
Rouen, 10 13¾
Sulphuric Acid—
Madras, £57 15s.
Tallow—
Turkey, 3 t. 14½ c.
Zinc Ashes—
Rotterdam, £110

TYNE.

Week ending January 14th.

Alkali—
Amsterdam, 96 t. 17 c.
Rotterdam, 8 11
Ammonia—
Barcelona, 11 c.
Valencia, 9
Antimony—
Amsterdam, 3 t.
Copenhagen, 1
Arsenic—
Barcelona, 3 t. 6 c.
Blanc Fixe—
Antwerp, 5 t. 5 c.
Bleaching Powder—
Amsterdam, 23 t. 18 c.
Antwerp, 19 10
Christiania, 9 17
Drontheim, 12 4
Gothenburg, 52 4
Rotterdam, 22
Caustic Soda—
Aalborg, 1 t. 14 c.
Gothenburg, 60 1
Rotterdam, 1
Colours—
Stavanger, 1 c.
Magnesia—
Antwerp, 1 c.
Barcelona, 5 t. 18
Genoa, 5
Manure—
Valencia, 20 t.
Paint—
Antwerp, 2 t. 15 c.
Rotterdam, 2 5
Painters' Colours—
Rotterdam, 2 dms.
Soda—
Amsterdam, 10 t.
Christiania, 4 8 c.
Rotterdam, 10
Sodium Sulphate—
Gothenburg, 75 t.
Moss, 425
Sulphur—
Gothenburg, 55 t.

GOOLE.

Week ending January 11th.

Chemicals *(otherwise undescribed)*
Boulogne, 2 cs.
Hamburg, 5 cks.
Coal Products *(otherwise undes.)—*
Amsterdam, 17 cks.
Boulogne, 2 dms.
Ghent, 9
Hamburg, 34 10
Rotterdam, 4
Dyestuffs *(otherwise undescribed)*
Hamburg, 1 cs.
Painters' Colours—
Antwerp, 2 cks.
Boulogne, 2
Calais, 1 cs.
Ghent, 3
Pitch—
Antwerp, 719 t.
Dunkirk, 41

GRIMSBY.

Week ending January 14th.

Alkali—
Dieppe, 5 cks.
Ammonium Sulphate—
Rotterdam, 300 bgs.
Chemicals *(otherwise undescribed)*
Dieppe, 5 cs.
Hamburg, 50 dms.
Coal Products *(otherwise undes.)—*
Dieppe, 55 cks. 9 pks.
Hamburg, 15 cs.
Manure—
Antwerp, 267 bgs.
Painters' Colours—
Antwerp, 9 cks. 1 pk.
Hamburg, 3 2 dms.
Rotterdam, 6
Pitch—
Antwerp, 81 t.
Stearine—
Malmo, 25 tcs.

PRICES CURRENT.

WEDNESDAY, Jan. 25, 1899.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9	&	8/3
,, Glacial .. .. ,,		35/-	
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	9
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	0	11½
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	0
Arsenic, white powdered .. .. nett per ton	16	10	0
Alum, loose lump .. .. ,,	4	5	0
Alumina Sulphate (pure) .. .. ,,	3	15	0
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¼ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2¾
,, = 24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	19	0	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	10	8	9
,, ,, (grey) Hull .. .. ,,	10	8	9
Aniline Oil (pure) .. .. per lb.	0	0	4¾
Aniline Salt ,, ... ,,	0	0	4¾
Antimony .. .. per ton	36	15	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	4	10	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	5	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizatine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 3 % A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	8
,, 50/90 ,, ... ,,	0	0	8
Carbolic Acid (crude 60°) .. .. ,,	0	1	11
,, (crystallised 40°) .. .. per lb.	0	0	6¾
,, (liquid 95/97%) .. .. per gallon	0	1	0
Creosote (ordinary) .. .. ,,	0	0	3
,, (filtered for Lucigen light) .. .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	2	0
Solvent Naphtha, 90% at 160° .. .. per gallon	0	1	2
Copper .. .. per ton	67	3	9
,, Sulphate .. .. ,,	22	10	0
,, Oxide (copper scales) .. .. ,,	47	10	0
Glycerine (crude) 80% .. .. ,,	24	0	0
,, (distilled S.G. 1250°) .. .. ,,	48	10	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	2	6
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	14	7	6
,, Litharge Flake (ex ship) .. .. ,,	16	5	0
,, Acetate (white ,,) .. .. ,,	25	0	0
,, ,, (brown ,,) .. .. ,,	17	15	0
,, Carbonate (white lead) pure .. .. .. ,,	17	10	0
,, Nitrate .. .. ,,	20	0	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	7	6
,, ,, (grey) (ex ship) .. .. ,,	7	17	6
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton	9	10	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	15	10	0
,, Borate .. .. per cwt.	2	0	0
,, Ore, 70% .. .. per ton	3	10	0
Methylated Spirit, 61° O.P .. .. per gallon	0	2	0
Naphtha (Wood), Solvent .. .. ,,	0	2	10
,, ,, Miscible, 60° O.P. .. .. .. ,,	0	3	9
Oils:—			
Cotton-seed .. .. per ton	15	10	0
Linseed .. .. ,,	18	10	0
Stearine .. .. ,,	26	0	0
Phosphorus (Yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	0	0
,, Chlorate .. .. per lb.	0	0	3½
,, Cyanide, 98 % .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) 90 % .. .. per ton	22	0	0
,, ,, ,, 75/80 % .. .. ,,	17	15	0
,, Potash Hydrate Liquid 50 % .. .. ,,	10	10	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	2	12	6
,, Prussiate Yellow .. .. per lb.	0	0	7
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	0
,, Muriate, 80 % ,, ... ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3½
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % .. nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	5	0
,, ,, (Carb. Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Soda Crystals) .. .. .. ,, ,, (f.o.r. w'ks.)	2	10	0
,, Acetate (ex-ship) .. .. ,,	12	10	0
,, Arseniate, 45 % .. .. ,,	13	0	0
,, Chlorate .. .. per lb.	0	0	3¾
,, Borate (Borax) .. .. nett per ton	16	0	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton (10 ton lots)	7	12	6
,, ,, (74 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,, (10 ton lots)	6	17	6
,, ,, (60 % Caustic Soda) .. ,, ,, (10 ton lots)	5	17	6
,, ,, (pure liquor 90° Tw.) .. ,, ,, (10 ton lots)	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25 % .. .. ,,	16	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	6
,, Nitrite, 98 % .. .. per ton	25	0	0
,, Phosphate .. .. ,,	10	7	6
,, Prussiate .. .. per lb.	0	0	5⅜
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	7	6
,, Stannate, 40 % .. .. per cwt.	2	15	0
,, Sulphate (Salt-cake) .. .. per ton	1	8	6
,, ,, (Glauber's Salts .. .. .. ,,	1	10	0
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	4	15	0
Strontium Hydrate, 100 % .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. .. per lb.	0	0	5¾
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton	7	0	0
,, (Roll Brimstone) .. .. ,,	6	0	0
,, Brimstone: Best quality .. .. ,,	4	12	6
Superphosphate of Lime (26 %) .. .. ,,	2	10	0
Tallow .. .. ,,	23	10	0
Tin Crystals .. .. per lb.	0	0	6½
,, English Ingots .. .. per ton	114	0	0
Zinc (Spelter) .. .. ,,	25	10	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	7	5	0
,, Sulphate, Crystal .. .. ,,	6	15	0

THE

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AND

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Advertisements intended for insertion in the current week's issue should reach the office by **Thursday morning** at the latest.

CURRENT TOPICS.

COMPULSORY ARBITRATION.

ON and off for some weeks the question of whether compulsory arbitration is capable of realisation has been under discussion, with the result that the proposition has apparently died a natural death.

At the first blush the notion seems rosy enough, but when we come to consider the principles involved we see that the idea is altogether opposed to the methods which have worked with anything like success in the past.

There is an old adage about taking a horse to water, and it is wholly applicable as an argument against any attempt at enforcing arbitration as a cure for strikes and lockouts. There is something in the merest suggestion of compulsion that makes the majority of workers as stubborn as only Englishmen can be.

It is quite another thing to insist upon the acceptance of an arbitration bond, because, before being pledged to one, the alternative of refusing to arbitrate at all is still open.

We know much has been said about the New Zealand Act, but it is not easy to comprehend how any such Act can prevent industrial war if—as might often be the case—the award is simply intolerable to one side or the other. How is the acceptance of a distasteful award to be enforced upon trade unions, to say nothing of the twenty thousand and odd members of any one union?

Even when masters and men are willing to resort to arbitration it is difficult enough to arrive at a decision which will be accepted by the men for more than a month or two, so that little relief could be expected when they had been compelled to submit to arbitration.

On the other hand, there is no doubt that the habit of striking produces effects more far reaching than the mere dislocation of a branch of industry. It makes it impossible for the employers to obtain the orders that they would otherwise secure, by compelling them to insert in their contracts clauses protecting them from penalties in case their workmen make the fulfilment of the contract impossible. Trade once lost in this way is not easily regained, even if the disturbing cause is removed. The unions do not see, but men of education might be expected to see, that this is a blow dealt as well at men as at masters, and even more at the latter than at the former.

The cause for pity is that so often trade is upset and diverted by strikes which are based on technicalities, so to speak, and which do not have for their object the focussing of evils which call for immediate consideration and redress. It is not till this matter is carefully viewed from both sides that we see how largely both employers and employed are in the same boat, and that it is to their mutual interest to keep their craft trim and taut.

SECRET COMMISSIONS.

The labours of the Secret Commissions Committee of the London Chamber of Commerce have been brought to a close, and we live in hopes of learning something definite about the true state of affairs. Despite some of the Law Court revelations it has frequently been argued that one black sheep does not prove that wool is not white, and of course there is a large element of truth in this contention. We understand that the report of the Committee is in the hands of the printers, and that a meeting of the Committee has been held to arrange for the distribution of the same. We sincerely trust that these arrangements will include ourselves among those who are to receive a copy.

We have reason to believe that, counter arguments notwithstanding, the report will be of a sufficiently startling nature to justify efforts being made to procure remedial and preventive legislation; and that in order to further this end public meetings will be organised to call attention to the necessity for bringing within the reach of the law those who have a weakness for the perpetration of bribery and corruption in order to "induce" business.

SOCIETY OF CHEMICAL INDUSTRY.

NOTTINGHAM SECTION.

THE fourth meeting of the session was held on January 25th, at University College, Nottingham, Professor Stanley Kipping, F.R.S., being in the chair. The honorary local secretary (Mr. J. T. Wood) read a short note on hide powder filters by Professor H. R. Procter, of the Yorkshire College, Leeds, which he introduced by briefly describing the standard method of tannin estimation adopted by the International Association of Leather Trades' Chemists. He thought it was well that the society should be kept posted in what was being done by this association, the subject being a very important one. The standard method at present in use was laid before the society in January (see *Journal*, vol. xvii., p. 6), and also in Professor Procter's Book, "Leather Industries Laboratory Book." The present note was the result of a commission given by the association to Professor Procter to prepare a pattern filter bell The result shows that the shape and size of the bell are dependent on the character and texture of the hide powder employed, and that with the Vienna powder the form of the bell has but little influence so long as the quantity of powder used remains constant.

A discussion took place, in which the chairman, Dr. Sudborough, Messrs. Caven, Pentecost, and Adams took part.

The secretary exhibited a very delicate hydrostatic balance by Kuhlmann. It is the same balance described in the *Journal* (xvii., p. 13), with the addition of an adjusting screw on the right hand side of beam, which renders it accurate to five places of decimals.

SCOTTISH SECTION.

The first meeting of the section for the new year took place in Edinburgh on the evening of Tuesday, January 31st, at 14, South St. Andrew-street The chairman of the section, Prof. G. G. Henderson, presided. Before proceeding to the business on the agenda paper, the chairman referred back to the preceding meeting (Glasgow, December 13th), at which Mr. Adam Millar had delivered an exposition of the discoveries he had made in the manufacture of artificial silk from gelatines. Considerable interest had been awakened, and the inventor had furnished to the office bearers of the section additional samples of the artificial fabric, and of the bobbins, etc., employed in bringing it to the stage of actual textile use. These, the chairman pointed out, were laid out in the room, so that members, if they chose, might furthur extend their examination of the interesting invention, an invitation that was taken advantage of by not a few, after the stated business of the meeting had been transacted. This business was opened by Mr. E. C C. Stanford, F.I.C., ex-president of the society, and ex-chairman of the section, who delivered some wise remarks on the domestic practices of tea infusion, and on the serious evils which spring directly from the uninstructed methods which are found so generally in vogue. Chemical analysis tells that it is the theine, and the theine only, which should, in the infusion, be got from the tea leaves, and that the tannin, which is so large a natural ingredient of the same, is powerful for evil only, and ought never to be permitted to get into the tea cup. Mr. Stanford finds that four minutes after the pouring on of water *just come to the boil* is the proper period for infusion. The infusion ought to be separated completely from the leaves at the end of the four minutes; but recognising the great difficulty of getting domestics to accord the nicety of attention necessary in such an operation, Mr. Stanford set to devising a pot which would do the time measurement itself, and in this he has succeeded. As was shown by diagrams, and by a specimen of the new infusor itself, the saving four minutes is measured off by a water regulator, the infusion being at once, and automatically, separated from the leaves, and, under a cosy, capable of being kept a considerable time waiting for use, while never in the slightest degree undergoing any further "strengthening," or chemical deterioration as it properly should be termed. Mr. Stanford's description proved to be of great interest to the meeting, and he was heartily thanked for his contribution. Mr. G. D. Macdougald, F.I.C., City Analyst for Dundee, then proceeded to describe the means by which he had attained to an analysis of milk samples much more rapid than any hitherto practised Within a space of six hours during the best part of the day he could put through hands, and frequently had done so, from 120 to to 140 different samples of milk and with results which, as regards accuracy, showed a very appreciable advance on those obtainable from Adams' wet gravometer process. At considerable length and plenteously aided by diagrams, &c., thrown on the screen, he went through the various manipulations tabulated as the basis of his system; but these do not readily lend themselves to condensed description, particularly in the absence of figure illustrations. Mr. R. R. Tatlock, of Glasgow, followed with a paper desiderating the fixing of a legalised standard of milk, a measure which, he contended, ought to stand as a most important provision in any new code of regulations bearing on the adulteration of food products. The law, as at present existing, was clumsy and unjust in its incidence to an extravagant degree. Dr. King, Edinburgh City Analyst, and others followed with remarks which generally supported the views that had been tabled. The meeting was well attended by chemists, and others specially interested in the subject of milk analysis.

MANCHESTER SEWAGE SCHEME.

CONFLICTING PROPOSALS.

THE Rivers' Committee of the Manchester Corporation have received an application from the Failsworth District Council, asking them to permit the drainage of the district to be diverted into the sewerage system of the Manchester Corporation. The Committee decline to entertain the proposal. With respect to the anticipated works rendered necessary by the proposed scheme of the sewage experts, Mr. Councillor Dreyfus, the deputy chairman of the Committee, and Mr. Councillor Johnston, were empowered to confer with Mr. Baldwin Latham with a view to his being appointed as the engineer to draft the plans and estimates of the scheme. They report that they have had interviews and communications with Mr. Baldwin Latham, and they think that arrangements can be made with him for the carrying out of the scheme. It has not, however, been practicable to formulate any definite arrangements, but Mr. Latham has forwarded them certain information on the subject, and they are of opinion that it is desirable that the Council should authorise the Rivers' Committee in their discretion to deal with the subject. and if an arrangement can be concluded with Mr. Latham, to affix the Corporate Seal thereto

Mr. Councillor N. Bradley has given notice to move an alternative proposal at the next meeting of the council in the following terms:—"That for the purpose of assisting the Rivers' Committee and the experts in formulating a complete and final scheme on the lines laid down at the inquiry held by the Local Government Board on the 12th and 13th January, 1899, Mr. Charles J. Lomax, C.E., of 37, Cross Street, Manchester, be engaged to prepare the detail plans and estimates of the proposed works, and that he be instructed to consult with Mr. Baldwin Latham, C.E., whenever necessary, the scheme to be so prepared that it will meet with the approval of the Local Government Board and the Mersey and Irwell Joint Committee, and that the same be submitted for the consideration of the City Council."

The British Fire Prevention Committee.—On Tuesday, this week, the above committee opened a station for testing fire-resisting materials, &c. The testing station is at No. 35, North Bank, Hanover Gate, Regent's Park.

Price's Patent Candle Company, Limited.—Subject to audit, the accounts of this Company show that the profit for 1898 is about £83,500., to which has to be added £6,013. 10s. 8d., undivided profit from 1897, making together about £89,500. Deducting the dividend of 15s. per share, amounting to £28,125., paid in September, 1898, a sum of about £61,400. will be available for disposition, and the directors recommend that the usual sum of £12,500. be written off for depreciation, that £32,812. 10s. be applied in paying a dividend of 17s. 6d. per share, that £10,000. be added to the reserve fund, and that the remainder, about £6,100., be carried forward.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Regulating the Supply of Sewage to Filters. E. Brown. 941. January 16.
Electric Carbide Furnaces. J. Bastick. 947. January 16.
Strike-everywhere, Non-phosphorus Matches. R. H. Jude. 949. January 16.
Aerating, etc., Liquid Fats. J. H. Hunter. 1,010. January 16.
Manufacture of Chlorates, Hypochlorites, etc. P. Imhoff and The United Alkali Co., Ltd. 1,017. January 16.
Treating Oil and Obtaining Grease Products. F. Biedermann. 1,029. January 16.
Anti-fouling Composition. T. H. Watson. 1,072. January 17.
Sewage Purifying Materials from Refuse Destructors. W. B. G. Bennett 1,200. January 18.
Pipes for Conveying Chemicals, etc J. Wilson. 1,215. January 18.
Apparatus for Drying Gelatine. T. Lomas. 1,263. January 19.
Improvements in the Manufacture of Carbon-dioxide. H. H. Lake. 1,360. January 19.
Manufacture of Hydrogen Peroxide. R. J. Yarnold. 1,399 January 20.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in Apparatus and Method for the Subjection of Liquid Substances to the Action of Air and other Reagents, more especially for the Treatment of Manganate of Soda or other Alkali. F. B. Felt, 5,557, Monroe-avenue, Chicago, U.S.A. Eng. Pat. 21,299. October 10, 1898.

This apparatus is intended mainly for the production of oxygen from liquid manganate by the action of hot air and steam. It consists of a square reaction tower, the upper half of which is fitted with baffle-plates. Into the bottom are led two pipes, one for steam and the other for air, both of which are provided with a branch spreading over the bottom of the tower. From this branch extends a number of air and steam jets, all of which look upwards Now, unless the liquid manganate (which about half fills the tower) is kept in circulation, the deoxidised molecules become oxidised again in passing up through the liquid, and to avoid this one of the chief features of the apparatus is introduced The bottom half of the tower is filled with vertical tubes, the lower ends of which are bell-mouthed, and sit over the air and steam jets. There are six figures.

Improvements in the Process for the Manufacture of Carbide of Calcium and Apparatus therefor. G. Bower, St. Neots, Hunts. (communicated by J. E. Hewes, 421, Chestnut-street, Philadelphia, U.S.A.). Eng. Pat. 2 983. January 25, 1898.

The furnace is of the horizontal electric type. In the forepart two electrodes, capable of moving on a pivot in a horizontal plane, are fixed. On starting the furnace these electrodes are brought together to form a V, and then gradually separated so as to admit a mixture of lime and carbon, which is fed in from a hopper by an automatic rammer. The carbide flows down the inclined bed of the furnace on to a grid, where it cools. By an ingenious electrical device the feed and current are mutually adjusted. Thus when the feed is insufficient the resistance is decreased, and the power of an electro-magnet augmented by the extra current passing, whereby it overcomes a controlling spring and operates a lever, which throws a friction clutch into gear and actuates the rammer. There are two figures

Apparatus for Recovering Acetate Liquor from White Lead and Washing White Lead. G. Bischof, 11, Victoria-street, Westminster, London. Eng. Pat. 30,444. December 23, 1897.

The mixture of white lead pulp and acetate liquor is fed from a hopper on to a pair of horizontal rollers. In passing between these the liquor is expressed and the pulp squeezed into a thin layer, which is removed in a flaky form by scrapers. The flakes and liquor fall on to an endless travelling screen, through which the acetate liquor escapes, the white lead being carried forward to a second pair of rolls. Here it is again squeezed and washed by a stream of water directed between the rollers. The film of white lead is once more detached by scrapers and caught on a second screen, thus separating the water and passing the flaked white lead forward to a convenient storing receptacle. There is one figure.

Improvements in Evaporating or Concentrating Apparatus. J. McNeil, Colonial Ironworks, Helen-street, Govan, and J. Lewkowitsch, Lancaster-avenue, Manchester. Eng. Pat. 30,616. December 28, 897.

This apparatus is suitable for concentrating soap lyes, etc. It is composed of a closed vertical metal vessel with a funnel-shaped bottom. At the point just above this contraction a rotating steam heater is fitted, which is made up of two hollowed discs, connected by an annular series of tubes. Steam enters through hollow trunnions. Scraping rings, operated by helical guides, keep the surface of the cylinder free from any crust of salts, etc. There are three figures.

An Improved Lubricant. J. Tennant, 104, King-street, Aberdeen, N.B. Eng. Pat. 1,582. January 20, 1898.

The mixture is compounded of the following:—1 gallon best French colza oil, 1 lb. sweated paraffin wax, 1 lb. of spirit-refined paraffin wax, and 2 lb. French chalk. One half of the colza is heated to 133° F., and the wax incorporated, the French chalk added, and the whole boiled. The whole is then cooled by the addition of the remainder of the oil. The proportions of the latter may be varied according to the desired consistency of the lubricant.

NOTES ON AMERICAN CHEMICAL TRADE.

THE C. C. Chemical Company, of New York City, has been organised to manufacture explosives. Capital £2,000. Directors: Stephen R. Branch and two others.

* * *

The Southern Chemical Company has been incorporated at Winston-Salem, N. C., to manufacture chemicals and fertilisers. Authorised capital, £20,000. Incorporators—H B. Bate, P. H. Hanes, W. F. Brown and F. H. Fries.

* * *

The Mexican Mining Company, of Mapimi, Mexico, has given the Riter-Conley Manufacturing Company, of Pittsburg, Pa., an order for three large cyanide tanks. Each tank will be 116 feet across and 12 feet high, and built of ¼ inch steel plate.

* * *

The Pittsburg Reduction Company, Pittsburg, Pa., has secured an order for 1,540,000 lbs. of sheet aluminium from Belgium. The company has awarded a contract to the Westinghouse Electric and Manufacturing Company for electrical apparatus for the Niagara Falls plant, the daily capacity of which will be from 20,000 lbs. of aluminium to 35,000 lbs.

* * *

The Union Carbide Company is to erect an additional plant at Niagara Falls, with a daily capacity of 50 tons. The company is also erecting a new plant at Sault Ste. Marie, with a daily capacity of 100 tons. The present plant was begun by the old Chicago gas companies, but was taken over by the Union Carbide Company.

* * *

The United States Navy Department have decided that what wood is used in their new ships shall be fireproofed. Various processes exist and are available for this purpose; but the United States Navy yard has decided upon a very simple general process resembling that of creosoting; the tar oil being replaced by a solution principally consisting of phosphate of ammonia and sulphate of ammonia. As is the case with creosoting, the principal object to be attained is to introduce the solution thoroughly into the pores and channels of the wood. In order to do this, it is necessary to first open the pores and replace the natural juices of the wood with moisture, which is afterwards evaporated off. The wood has to be carefully stewed, however, not boiled, or the pores would be sealed up.

* * *

Following the example of the Cleveland-Cliffs Iron Company, at its Gladstone (Mich.) furnace the Ashland Iron and Steel Company will, during the present year, erect a large by-product charcoal oven plant near the furnace at Ashland, Wis. The by-product system of the Gladstone furnace has been working to the utmost satisfaction, it is understood.

Obituary.—We regret to learn from Swansea that Mr. J. D Pritchard, the well known chemical manufacturer, died this week, aged 80. The deceased was at one time the largest oxalic acid manufacturer in the world.

Reports of Companies.

NEW TAMARUGAL NITRATE CO., LTD.

The adjourned annual general meeting of the New Tamarugal Nitrate Company, Limited, was held on Monday at Winchester House, E.C., Mr. Thomas F. Read presiding.

The Chairman said: You will remember that on December 27, 1898, when it had been suggested that the meeting had been called for a somewhat inconvenient date and that an adjournment was desirable, the directors had no difficulty in accepting the resolution, and it is our duty to-day to take up the proceedings from the point they had reached at the moment of adjournment. To avoid misconception and to keep our proceedings in order, I may mention that the chairman had touched upon the various items in the accounts, and after proposing the adoption of the report and accounts, invited in the usual course the questions of shareholders. It was in the course of his replies to these questions that the anjournment was moved and carried, and we have to-day, as I am advised, merely to complete the replies to the questions then put, and pass on to the remaining portion of the agenda. A shareholder asked why our stocks of nitrate were valued at £38,384. on July 31, 1897, and at only £21,188. on July 31, 1898. The explanation is very simple When the former valuation was made we held a large stock of dear nitrate; in 1898 our stocks were much smaller, and consisted of a large portion of cheaply-made nitrate; for we were then working a cheaper oficina. One gentleman asked why we did not shut up our works when we found prices got so low. As a matter of fact, we did close the works of La Patria, which is a somewhat more expensive oficina to work than La Parma. In the case of La Parma there was not the same necessity; it had just been put into first-class condition for economical working, and we felt that in this oficina, at all events, we could make at a profit as much nitrate as any quota under

THE IMPENDING COMBINATION

would allow us to make. Under the new arrangements made with our bondholders and with our colleagues, who guaranteed the interest of our bonds, we are bound with a profit-making oficina, even at prices lower than those now current, to do our best to meet our liabilities. One of the shareholders asked how we stood with regard to combination. This is, of all questions, one of greatest importance to us at present. A month ago there seemed in some quarters great hope of an agreement being come to; but some producers, English and Chilian—ourselves among the number—thought that the quota allowed to them was insufficient. As unanimity was absolutely imperative if the combination were to be carried through, the scheme has temporarily

FALLEN INTO ABEYANCE.

That it will be revived in a slightly modified form I have little or no doubt, and we trust that means will be found to reconcile those producers who were dissatisfied with the quota recently assigned them. What we can do to facilitate an agreement we shall assuredly do; for your directors are unanimously in favour of a combination. As we look round us we find everywhere evidence that under analagous conditions it is only by the formation of trusts, unions, or combinations that trades can remove the evils incident to excessive competition in the matter of production or in the matter of sales. With a constantly increasing consumption, and with the healthy statistical position which nitrate now shows, it is absurd to suppose that the present value of nitrate is a fair and reasonable one, or one that can last. The weaker producers will not work much longer at a loss. There is no trade in the world which is more suitable for the successful operation of a trust or combination than the nitrate trade; but, if such a combination be formed, it

MUST BE ON SOUND PRINCIPLES,

or it will fail in its object. The combination which was formed in 1896, and broke down in November, 1897, was not a sound one, and many of us foresaw its speedy collapse. In the negotiations which preceded its formation your directors were willing to meet the trade as far as possible, and felt that in joining they were committing themselves for a comparatively short time only.

Now, however, a combination is proposed on a far wider and more substantial basis and is one likely to last for a much longer term of years. It is essential, therefore, that we should take every means to secure for you a really equitable share of the trade, and we asked for a quota which, in our opinion, really represented our rights. Some 30 oficinas have already stopped work, and others will perforce do the same unless an agreement be shortly come to. Our oficina La Palma will not be among the number; though, not by any means the cheapest producer, it is certainly, to-day at all events, not amongst the dearest. Our machinery is reported to be in splendid condition, and our

GROUNDS WILL LAST MANY YEARS.

From what I have just said I do not wish it to be understood for one moment that your board has taken up a defiant attitude towards the rest of the trade—far from it; but I do say that the personal guarantee of the interest on your bonds during the next twelve months, given as part of the recent arrangement with your bondholders by two members of your board, and the relief obtained under that arrangement from the necessity of drawing bonds at 105, or even of purchasing them in the market in unprofitable years, places you in a strong position when demanding a fair quota, and justifies your board in expressing its confidence that with your support it will get what is fair and bring you into prosperous times again. I come now to the question of directors' fees, which certain shareholders raise at each meeting. I think your directors have responded to your confidence in this matter. The accounts before you do not show it quite so clearly as might be desired, because this company's financial year closes earlier than the calendar year, and the extent of the reductions made each year does not show in the accounts till a considerable period has elapsed. For instance, you will not see until the accounts are submitted next December the reduction that the directors agreed to make so long ago as January of last year. Your directors have made no parade of the fact and have made no promises; but they have, nevertheless, voluntarily and as occasion offered, reduced their fees till they are now about one-third of what they are entitled to, and they have done this in spite of the great increase in their work and anxiety as the trade distress deepened. I must ask you to kindly continue the confidence you have hitherto shown us in regard to this and other items of our London charges. One shareholder asked, in connection with fees, how many attendances the directors had given in the course of the year. That is a question I do not intend to answer. As honourable men we have never limited our attendance to the regular meetings required for the transaction of business. We have never grudged our time or trouble, and still less shall we do so in anxious times like the present. A shareholder complained about the trustees' fees, but these are beyond the control of your directors, being fixed by the debenture trust deed. I think I have now touched upon all the points on which information was asked, and if it is your wish I will now put the resolution for the adoption of the report and accounts. After some discussion the resolution was passed.

PACCHA AND JAZPAMPA NITRATE CO, LTD.

Mr. Manby presided over the statutory meeting of this Company, held at Winchester House, London, on Wednesday. He said that since the formation of the Company on its present basis the directors had decided on a policy of inactivity for the present. Their reasons for doing so were very simple. They could not produce nitrate at a profit at the exceptionally low prices that were ruling at the present time; there were very few companies that could. The directors had thought wisely that they would not exhaust their grounds at a nominal profit, or perhaps at an actual loss. They thought it better to wait for a combination of producers or a largely increased demand for the article. Perhaps before long nitrate might rise to a higher level, which would permit them to work at a profit. They did not know how long they would have to wait for that change, although a combination might be formed any day. There were about 70 nitrate producers who, if they were alive to their own interests, ought to combine. They must however, have patience, and wait until those who were holding aloof agreed to combine. In the meantime the directors of the Paccha Company had reduced their expenses to a minimum. The game was to sit tight and wait for events. The present price of nitrate was 4s. 6d. and 4s. 7d., which was too low for any Company to sell at and make a profit. If there was a combination the price would go up to 5s. or 5s. 6d.—which was a very moderate ambition to indulge in,—and that would enable them to make a fair profit. If the price went up to 6s. they would make a large profit on their capital. As this was a statutory meeting there was no motion to put to the shareholders.

Gift to the Cambridge Engineering Laboratory.—An anonymous donor has presented £500. to the Cambridge University for the purpose of providing apparatus for the engineering laboratory.

Personal.—We are advised that Mr. James Maclean has resumed business as a chemical broker and general merchant, at 12, Bank-street, Royal Exchange, Manchester, where he will conduct business under the style of James Maclean & Co.

Cornwall and the Advance in Tin.—It is reported from Redruth that the recent heavy advance in the price of tin is causing excitement in Cornwall. At the fortnightly auction at Redruth, on Tuesday, Dolcoath tin fetched £65, against £38. a year ago, and several prices were £8. above the previous fortnight's figures Such prices are, of course, a great incentive to increased production; but, as far as the Cornish mine-owners are concerned, the instability of the market is a serious deterrent. By the time they have got larger supplies on the market there is no knowing what return they will get for their capital outlay. Happy is the man who holds stocks now.

THE NEW YORK CHEMICAL MARKET IN 1898.

THE year 1898 has been an active one, and many new companies have been formed for the purpose of making chemicals of various descriptions. New plants have been built, especially in the middle West, where the extensive deposits of salt have favoured the erection of alkali works. On the other hand, the methods of producing heavy chemicals are being improved continually. The time is not very distant when our imports will be at a minimum as compared with consumption.

With an increased home production there is always some demoralisation in market prices, and the chemical trade is no exception. In some lines, such as phosphates, prices are considerably above last year, and it is believed they will go still higher. From all indications, 1899 promises to be a prosperous year for the American chemical industry.

Heavy Chemicals.—With the increased output of new works the imports are decreasing, and this is particularly so in the case of soda ash. On the other hand, the States are building up some export business, and during the year soda ash has been sent to Australia, China and Japan, in addition to the Central and South American States.

The North American Chemical Company was incorporated in Michigan to represent the United Alkali Company in this country. The capitalisation of the new company was placed at £120,000., two-thirds being preferred stock and one-third common. The articles of association covered many objects, the principal ones being the manufacture of chemical products. The operations are to be carried on in Bay and Wayne counties, Mich., and other places in the United States. Of the total capitalisation, £60,000 has been actually paid in. The largest number of shares of the stock are held by John A. E. Rayner, of Liverpool, England. In September this company had a large plant at work in Bay City, Michigan, and it is stated the output of soda ash and chlorate of potash will be greatly increased in the coming year.

The Solvay Process Company's plant at Detroit, Mich., was making early in the year about 150 tons of soda ash per day, while its capacity is 300 tons a day.

The Michigan Alkali Company at Wyandotte, Mich., is increasing the output of its No. 2 works from 200 tons soda ash per day to 300 tons. The Pennsylvania Salt Manufacturing Company has also purchased property in Michigan for a new plant to make soda ash, caustic soda, and bicarb. soda by the ammonia soda process.

In February it was reported that the Anglo-American Finance Syndicate, Limited, an English incorporation with £50,000. capital, would erect alkali works at Kanapolis, Kan., but nothing further has been heard of the enterprise.

Caustic Soda.—The imports into the United States during the ten months ending October 31st, 1898, amounted to 21,065,250 lbs., against 51,794,308 lbs. last year. With the opening of the year domestic caustic soda suffered from a heavy production, and consequent cutting of prices. High test caustic soda after reaching 1dol. 85c. per 100 lbs., dropped to 1dol. 45c. f.o.b. works in January, while foreign makers were selling at 1dol. 80c. to 1dol. 95c. Powdered caustic soda was stationary at 3½c. to 3½c. per lb. The prices of caustic soda in January, 1897, were somewhat higher. The stocks in bonded warehouses at New York on January 31st, 1898, amounted to 618,917 lbs., against 615,236 lbs. in the previous year. Early in February, American caustic soda of high test fell to 1dol. 55c., and the foreign to 1dol. 70c; and in March the former tumbled to 1dol. 40c., while the latter remained at 1dol. 70c. The stocks in the bonded warehouses on April 1st were 574,000 lbs. or 44,917 lbs. less than was held February 1st. During April and May prices were 1dol. 50c. to 1dol. 55c. for domestic, and 1dol. 65c. to 1dol. 80c. for foreign caustic soda, notwithstanding the increased stocks in bonded warehouses at New York, which on May 1st amounted to 1,059,966 lbs. Powdered caustic soda (98%), from April to June inclusive, ruled firm at 2⅞c. per lb. From June to August domestic caustic soda fluctuated between 1dol. 40c. and 1dol 50c., while the foreign brought about 20c. more. As August closed contracts were taken for 1899 delivery at 1dol. 25c. to 1dol. 30c., while spot domestic was quoted at 1dol. 40c. and foreign at 1dol. 60c. Powdered caustic soda sold down to 2½c. in September. Quotations for domestic high test caustic soda for the last quarter of this year ranged from 1dol. 35c. to 1dol. 50c. f.o.b. works, and for foreign 1dol 60c. to 1dol. 70c. delivered. Powdered was worth 2¾c. to 3c.

Alkali.—Business has not been as remunerative as last year, especially in domestic makes. Our imports show a large decrease. During the ten months ending October 31st, 1898, the United States imported 58,437,008 lbs., against 125 326,441 lbs. in the same period in 1897. Of these imports we re-exported 2,895,645 lbs., against 2,187,936 lbs. in 1897. In January competition was very keen, forcing the price of domestic alkali from 60 to 50c. per 100 lbs. f.o.b works. The appearance of new English makes had also a depressing effect on the market, and sales of the foreign article were made at about the same price as the American. From March to December domestic alkali brought from 45 to 60c. while the foreign were quoted at 70 to 75c. per 100 lbs.

Bleaching Powder.—Within the past year several of the leading makers of bleaching powder in France, Germany and Belgium have entered our market in competition with the United Alkali Company of Great Britain, and as a result prices have been pushed rather hard. Besides, the new works at Niagara Falls, N.Y, put their product on the market in May, and a few months later the makers reported that they had booked orders for their entire output for some time to come. The imports into the United States during the ten months ending October 31st, amounted to 89,024,871 lbs., against 86,338,062 lbs. last year. Of these imports we re-exported 28,495 lbs., as against 35,052 lbs. in 1897. In January English prime brands of bleaching powder were quoted at 1dol. 80c. to 1dol. 85c. per 100 lbs., while continental makes ruled at 1dol. 70c. to 1dol 90c. These prices are a little higher than the opening last year. In March, 1898, English prime brands sold down to 1dol. 60c., and continental at 1dol 65c.; and with the opening of April quotations were 1dol. 75c. to 2dols., and 1dol. 60c. to 1dol. 80c. repectively, and with few exceptions sellers held these prices until July 1st, though sales of French bleaching powder were reported at 1dol. 35c. Early in July the American makers of bleaching powder reported that they were sold ahead for some time to come and therefore quoted 1dol 70c. to 1dol 80c. per 100 lbs. at works, while the foreign makes were offered at 1dol. 40c. to 1dol. 65c. At the opening of September the United Alkali Company's brands could be had to arrive at 1dol. 37½c. to 1dol. 40c., while the other makes were obtainable at correspondingly lower prices, notwithstanding the market quotations of 1dol. 45c. to 1dol. 60c. In September higher prices were asked, and at the close of December prime English brands were quoted for 1899 delivery at 1dol. 50c. to 1dol. 62½c., while other makes were offered at correspondingly lower prices. Spot business was done in English prime brands at 1dol. 65c. to 1dol. 75c., and others at 1dol. 40c. to 1dol. 65c. according to test and make.

Bicarbonate of Soda.—In January domestic bicarbonate of soda was quoted at 1dol. 25c. to 1dol 50c. for ordinary, and 3dols. 25c to 3dols. 50c. per 100 lbs. for extra grades, while the foreign sold at 2dols. 25c. to 2dols. 50c. Thereafter, prices fluctuated somewhat, and purchases of ordinary domestic were made in the last quarter of the year at 1dol. to 1dol. 25c., while the finer grades ruled firm at 3dols. 25c. to 3dols. 50c., less the usual discounts.

Chlorate of Potash.—The experiments for making chlorate of potash in America have at last been successful, and it is estimated that the output of the Bay City (Mich.) plant in 1899 will aggregate about 35,000 kegs. At Niagara Falls, N.Y., a fair amount of chlorate of potash has been produced. Our increasing home production has naturally reacted on imports, and has to some extent affected prices. For the 10 months ending October 31st, 1898, the United States imported 4,156,548 lbs. of chlorate of potash, against 5,891,104 lbs. a year ago. This article opened in January at 8¾c to 9⅜c per lb., an increase of 1c. to 1⅜c. from a year ago. The war sent prices up to 18c. Importations were stopped for a time, but the scare passed and in July prices fell, and purchases were made at 8¼c. to 8¾c. per lb. A combination was effected among the English and continental makers to govern 1899 trade, and quotations in July were 9¼c. to 9½c. In October prices were 9¼c. to 10¼c., and December closes at 9⅝c. to 9½c per lb.

Acids.—This has been a pretty good year for the acid makers. For the 10 months ending October 31st, 1898, the United States sent forward 12,952,183 lbs. sulphate of copper, besides 153,666dols. worth of miscellaneous acids, showing a large increase over the previous year. As the year progressed there were heard many rumours of a new agreement among the acid makers, but nothing has yet resulted.

Commercial or No. 8 acetic acid was steady in January at 1dol. 40c. to 1dol. 50c per 100 lbs., a gain of 5c. as compared with 1897. The Paris green makers consumed quite a good deal of acetic acid. In November this acid sold around 1dol. 35c., and in December at 1dol. 30c.

The various degrees of muriatic acid were firm in drums in January at 1dol. per 100 lbs. for 18°; 1dol. for 20°, and 1dol. 12½c. for 22°, while in carboys the prices were 1dol. 50c., 1dol. 75c. and 2 dols. respectively. These prices are about 25c. higher than the opening quotations in 1897. In March, 1898, two of the largest makers shut down, as they could not dispose of their salt cake. For 18° the quotation in March was 1dol. in drums and 1dol. 37½c. in carboys, and from then on 1dol. 10c. to 1dol 75c. were the prices. For 20° makers asked during the same period 1dol. 10c. to 1dol. 87½c. For 22° the quotations were 1dol. 12½c to 2dol. 25c.

In January nitric acid sold on an average of 25c to 50c. less per 100 lbs than in the preceding year; the quotations in 1898 being 3dols 25c per 100 lbs. for 36° in drums, and up to 4 dols 12½c. in carboys; 3dols 75c and 4dols. 75c for 40°, and 4dols. 12½c. and 5dols. for 42°. Makers strengthened their position as the year advanced and after the first quarter they asked from 3dols. 25c. to 4dols. 75c. for 36°, according to quantity. For 38° the quotations were 3dols. 50c. to

4dols. 62½c. ; 40°, 3dols. 75c. to 4dols. 87½c , and 42°, 4dols. 12½c. to 5dols. 25c. per 100 lbs., according to quantity.

January found 66° sulphuric acid selling at 1dol. per 100 lbs., in drums and up to 1dol. 75c. for carboys. These prices compare with 85c. and 1dol. in 1897. In March prices fell to 1dol. for drums and 1dol.65c. for carboys, but as soon as raw material market was affected by the war, sulphuric acid became stronger, and makers asked 1dol. 10c. to 1dol. 75c. according to quantity.

The 50° chamber acid was steady at 7½dols. to 8dols. per ton f.o.b. factory in January, and from April on jobbing lots were sold at 11½dols. to 12dols. per ton.

Early in January contracts for oxalic acid were taken for six months' delivery at 6dols. 50c. per 100 lbs , while a jobbing business was done at 7dols. 50c. In January, 1897, the quotations were 7dols. 25c. to 7dols. 50c. The combination held prices steady at 6dols. 50c. to 7dols., after most of the 1898 contracts had been booked. In July sales were reported from dock at 6dols. 25c., and from store at 6dols. 75c In October contracts were taken for 1899 delivery at 6½c., and in December the syndicate reduced its price to 6¼c , at which further contracts were booked.

Copper Sulphate.—The best grades of blue vitriol were quoted in January at 3dols. 37½c. to 4dols. per 100 lbs , as against 3dols. 75c. to 4dol. a year ago. As soon as the export business began prices improved, and in May they were quoted at 3dols. 37½c. to 4dols. 12½c , according to quality. From June until December prices fluctuated between 3dols. 25c. and 4dols. During this period some Western makes came on the Eastern market, which weakened the market, and sales were reported of good grades at 3dols. 50c. Poor grades could be had at as low as 3dols. 12½c.

Brimstone.—The Sicilian sulphur trust has kept prices up to a profitable basis, and were it not for the war between the United States and Spain the quotations would probably have been the same as in 1897. Best unmixed seconds from January to March were quoted at 20dol. 50c. to 23dol. per ton. In May a small quantity sold at 37dols. 50c., and a month later it was reported that one purchase had been made at 75dols , but a leading importer expressed much doubt as to this sale. During the early part of the war shipments of brimstone were made to Montreal, Canada, from Sicily, and thence to the United States. In June prices were still high, and one seller quoted 40dols , but in July supplies were plenty at 21dols. for best unmixed seconds, and 19dols. for thirds. From August to December best unmixed seconds were obtainable at 20dols. to 23dols., though an occasional quotation of 24dols. or 25dols. was heard. Best thirds brought from 18dols. to 20dols., and here also there were dealers asking up to 22dols. for spot goods. The importation of brimstone from Japan has virtually been stopped, owing to the unfavourable condition of the industry in that country. Within the past year several new discoveries of brimstone have been made in the United States. The sulphur taken from the Utah mines has found a market among paper mills in the West, and it is said that purchases have been made for delivery in Wisconsin at about 6dols. per ton less than the Sicilian. Deposits have also been opened in Venezuela, where the Venezuela Trading and Investment Company, of New York, owns several hundred acres. The sulphur ore there is said to average 62½ per cent. in sulphur, and can be delivered in New York at not more than 6dols. per ton. Work is to be actively prosecuted in 1899.

Pyrites.—The demand has largely increased this year, while prices have not fluctuated to any great extent. New deposits of pyrites have been exploited in the United States, while the established companies have operated in a regular way. Considerable pyrites have also been imported from Spain and from Newfoundland. The Pennsylvania Salt Manufacturing Company is probably the largest individual consumer of Spanish pyrites. Of late bisulphite pulp makers have been experimenting with pyrites. It has been suggested that the sulphurous acid be made in the vicinity of the pyrites deposits, and shipped in steel cylinders. The coming year will doubtless show a large consumption, not only among acid makers, but in other industries. The pyrites imported from Spain contain from 46 to 51 per cent. sulphur ; the Newfoundland, or Pilleys Island, about 50 per cent., and the American from 42 to 44 per cent. sulphur. Quotations were as follows : American lump ore (basis 42 per cent.), 3·25dols. per long ton, f.o.b., mines ; Mineral City, Va., 5dols. to 5·25dols., f o b. Davis, and Charlemont, Mass. ; Pilleys Island, 6·50dols. delivered in New York. American fines ranged from 2·75dols. to 3dols. per long ton, f.o.b. Mineral City, Va. ; 4·25dols., f.o.b. Massachusetts, and 4·50dols. for Pilleys Island, delivered in New York. Spanish pyrites ranged from 10c. to 13c. per unit, according to percentage, delivered ex ship New York and other Atlantic coast ports.

Arsenic.—A combination was effected by the foreign makers of white arsenic lately, and prices have since been well maintained. In October, when the report first gained circulation, the quotation wss 3⅞c. per lb. for shipments and 4c. to 4½c. for spot goods, and in December the quotations were 4c. to 4½c. per lb. Besides the English makes, some Canadian arsenic has been sold on the Eastern market at rather low prices. The red arsenic, which comes largely from Germany, is worth 7¾c. to 8c. per lb.

Saltpetre.—The consumption of saltpetre in the United States is supplied largely from Calcutta, India. The prices did not fluctuate very widely until the second quarter of the year, when it was declared contraband of war. On July 1st crude saltpetre was quoted at 5c. per lb. for stock on spot and afloat, while refined commanded 6½c. to 7c. per lb. The visible supply on July 1st was 17,887 bags, or 27,916 bags less than at the corresponding period in 1897. The stocks in hands of importers at New York on July 1st amounted to only 5,000 bags, as against 20,500 bags in 1897. Business in October was limited, but prices steady at 3⅜c. to 3¾c. per lb. for spot crude, and 3·15c for shipment. The imports from January 1st to December 31st amounted to 62,449 bags, against 77,137 bags in 1897. The consumption during this period amounted to 75,095 bags, against 81,109 bags in 1897. The stock on hand December 31st was 2,822 bags, against 15,468 bags in 1897.

Paris Green.—In February the Commercial Chemical Company of the United States was formed by the Adler Colour and Chemical Works, A. B. Ansbacher and Company, I. Pfeiffer, Frederick L. Lavenburg, and Morris Hermann and Company, believing they could in that way dispose of their product more economically. The Commercial Chemical Company fixed prices early in the year at 16c. to 16½c. per lb. for strictly pure Paris green in kegs or casks, in a large way, and in the second week in May it advanced the prices to 17½c. to 18c., but allowed a net reduction by giving increased rebates. In December outsiders quoted 9c. to 9½c. per lb. for next season's business ; and as these figures were considerably below the combination figures, a meeting was held by its members, and after due consideration they separated.

Copperas.—The combination, formed in 1897, on May 1st, 1898, advanced prices from 52½c. per 100 lbs. to 62½c. for carload lots, and to 67½c. and upward for smaller quantities, and at the close of the year 57½c. is asked.

Fertilising Chemicals.—This year has shown an increase in the consumption of fertilisers in the United States. The demand from the South has been interfered with by the low price of cotton. According to States, the estimated consumption in 1898 was as follows : Alabama, 75,000 tons, against 80,000 tons in 1897 ; Florida, 70,000 tons, same as last year ; Georgia, 400,000 tons, against 410,000 tons ; South Carolina, 200,000 tons (160,000 tons) ; North Carolina, 175,000 tons (130,000 tons) ; Tennessee, 25,000 tons (45,000 tons) ; Kentucky, 25,000 tons (30,000 tons) ; Mississippi, 35,000 tons (40,000 tons ; Arkansas, 30,000 tons, same as last year ; Louisiana, 25,000 tons (40,000 tons) ; Texas, 40,000 tons (30,000 tons) ; Virginia, 180,000 tons (70,000 tons) ; West Virginia, 40,000 tons, same as last year ; North-eastern States, 100,000 tons (110,000 tons) ; Western States, 155,000 tons (125,000 tons) ; Northern States, 200,000 tons (240,000 tons) ; total, 1,775,000 tons, against 1,650,000 tons in 1897.

The imports of fertilisers into the United States during the ten months ending October 31st, 1898, were valued at 920,879dols., against 917,505dols. in 1897, and 790,088dols. during the same period in 1896. Our exports of domestic fertilisers during the ten months in 1898, amounted to 4,225,133dols., against 4,631,247dols. in 1897, and 3,804,037dols in 1896, made up largely of phosphate rock. Besides these exports, we re-shipped during the same period 11,360dols. worth of the imported fertilisers, against 4,504dols. in 1897. We also built up a good export business in high-grade Western blood and tankage. Probably the most interesting feature in the fertiliser industry is the organisation of the Virginia-Carolina Chemical Company, of Richmond, Va., which was formed in 1898 with a capitalisation of 12,000,000dols. It has thus far acquired 27 fertilising plants in the South, and is negotiating for more. This company intends to renovate its new acquisitions and to increase their output.

There was also a combination in the Atlantic Menhaden fishing industry, headed by the Churches, of Rhode Island. This pool was named the American Fisheries Company, had the support of some Englishmen, and was capitalised at 10,000,000dols. It is now extending its field of operation, and latest advices state it will build a large fish factory in Texas. The supply of fish scrap from Menhaden this year was less than 1897. The Menhaden Oil and Guano Association report that in the season of 1898 45,000 tons of scrap were made, as against 54,000 tons in 1897. The association had 40 factories in operation, against 41 last year, while the capital invested was 2 500,000dols., against 2,000,000dols. in 1897.

Sulphate of Ammonia (from gas liquor), was sold in January on a basis of 25 per cent. at 2dols. 32c. to 2dols. 55c. While bone was quoted at 2dols. 25c. to 2dols. 45c. per 100 lbs. From February to June prices fluctuated widely, and were for gas liquor 2dols. 35c. to 2dols. 65c., and for bone 2dols. 25c. to 2dols. 47½c. July opened with 2dols. 47½c. to 2dols. 50c. quoted for gas liquor, and 2dols. 40c. to 2dols. 45c. for bone. By August the foreign market grew stronger, and a sympathetic rise in price was experienced in New York ; gas liquor was quoted at 2dols. 55c. to 2dols. 57½c., and bone at 2dols. 40c. to 2dols.

45c. In September the prices went up to 2dols. 60c. to 2dols. 62½c. for gas liquor, and 2dols. 45c. to 2dols. 50c. for bone, but as the month closed there were offerings of liquor at 2dols. 55c. to 2dols. 57½c., and bone at 2dols. 40c. to 2dols. 45c. The first shipment of liquor was made from the Semet-Solvay bye-product coke ovens at Ensley, Ala., in September, amounting to 11,000 gals., which went to Syracuse, N Y. In December, a fire occurred at these works, which will interfere with farther production for a time at least. At the close of December gas liquor sulphate sold at 2dols 65c. to 2dols. 67½c., and bone at 2dols 55c. to 2dols. 57½c. The prices are from 25c. to 35c. higher than last year. In 1899 we may expect a large increase in the production of sulphate of ammonia, as there are several of the coke oven plants now being built to save the bye-products.

In *potash salts* an increased consumption was noted during the past year, while prices were stationary, as fixed by the German Kali Works. Quotations at New York and Boston were as follows: Muriate of potash, 80 to 95 per cent., 1dol. 78c. to 1dol. 81c per 100 lbs.; sulphate of potash, 90 to 96 per cent. 1dol. 90½c. to 2dols. 3½c.; double manure salts, 48 to 53 per cent. 1dol. 3c.; kainit, 12·4 per cent., 8dols. 50c. to 8dols. 80c. per long ton; sylvinit, 36½c. to 37½c. per 100 lbs.

Paints.—Early in February five of the leading manufacturers of vermilion—the Adler Colour and Chemical Works, A. B. Ansbacher and Co., Morris Hermann and Co., F. L. Lavanburg, and Isaac Pfeiffer—came to an agreement to maintain prices in the United States, and to sell their vermilion through a single sales agent, R. P. Rowe. Although two of the other leading concerns, the F. W. Devoe and C. T. Raynolds Company and D. F. Tiemann, did not join in the combination, they agreed to hold prices, which were 54c. per lb. in kegs, and 55c. in bags. In December American quicksilver vermilion was quoted at 59c. in bulk, and the lead at 14c. to 16c. per lb.—*Engineering and Mining Journal.*

MANCHESTER CHAMBER OF COMMERCE.

REPORT OF CHEMICAL SECTION.

FOUR meetings were held by the Executive Committee last year, the general section having met once.

Since the last annual report a great advance has been made in the direction of ascertaining the powers of the Board of Trade to grant applications for compulsory licences under Section 22 of the Patents, Designs, and Trade Marks Act, 1883. The Committee had suggested the great desirability of simplifying and amending this section of the Act, which in its effect was and still is extremely prejudicial to British trade. Owing to the vagueness of its language it had before last year never been authoritatively construed. As mentioned in last year's report, the official answer to this suggestion for amendment was, "We have the powers, if someone can be found to put us in motion. We must have a petitioner who will carry the matter through." Mr. Levinstein's petition having been accepted by the Chamber as a fair test case was carried to a successful issue this year. The proceedings were officially described as an "application" for a licence, but the case was in reality an expensive lawsuit lasting eleven days, involving the revelation to the respondent of the applicant's business processes.

It is not necessary to say more in this report than that the Referee decided in Mr. Levinstein's favour on all counts, even accepting his suggestion as to the amount of royalty that should be payable. (The Order was published in the *Journal*, 582, p. 39.) That the applicant has been successful by no means proves that the method of procedure provided is a satisfactory one. No one will ever apply for a compulsory licence to the Board of Trade and run the risk of the invalidation of his patents, and the publication of his private business. Those who do so must be prepared to face an expenditure of £2,000., the costs to the applicant in the present proceedings. One need not go further than a remark made by the Referee during the hearing of the proceedings. He said: "Whatever the intention of the people who framed this section was, they have not stated it in the clear and definite language that an Act of Parliament ought to be drawn in." This is the essence of the contention of the Chemical Section. By the efforts of the Committee great publicity was given in the newspapers and trade journals to the terms of the Order, and general satisfaction was expressed in the references to the subject. With regard to the costs the issue of circulars has brought in promises amounting to £338., which are probably capable of being greatly increased if an active effort were made in that direction.

It may here be remarked that the Board of Directors of the Chamber showed their appreciation of the public spirit and ability displayed by Mr. Levinstein throughout the proceeding, by passing a resolution expressing their sentiments, and this was presented to Mr. Levinstein in a handsomely bound engrossment.

The next work of the Committee with reference to Section 22 is to obtain such an amendment of the statute as will make it intelligible, and will carry out the intentions of the existing legislation.

Simultaneous Expiry of Home and Foreign Patents.—As cognate to this matter, the simultaneous expiry of Home and Foreign Patents is a matter which will naturally occupy the attention of the Committee, and Mr. Cawley M.P., has been requested to put a question in Parliament on the subject.

The Testing House.—Messrs. George E. Davis and Samuel Chadwick have been elected to represent the Chemical Section on the Composite Committee appointed to manage the Testing House.

International Convention for the Protection of Industrial Property.—The Committee is alive to the importance of keeping in touch with the Board of Trade as to the matters discussed at the meetings of this official body. It is only within the last few days that a report of the last meeting held in Brussels in December, 1897, has been supplied to the Chamber by the Board of Trade. It has been ascertained that foreign Chambers received reports from their Governments many months ago. No date has yet been fixed for the next meeting.

The Unofficial International Association for the Protection of Industrial Property.—In consequence of the interview which took place early last year between a Special Committee (composed of certain members of this Section and a few members of the Trade Marks Committee) and Dr. Osterrieth and Mr. Iselin, of the above association, Mr. Levinstein and the Secretary of the Chamber attended these meetings in London, and took part in the debates. They were principally impressed by the fact that foreigners took more interest in the proceedings than did the people of this country, and that they were thoroughly informed of the position of their own Governments on every point discussed at the official convention.

The Boiler Inspection and Registration Bill, 1898.—The Committee watched this Bill, and will continue to do so should it be re-introduced, being of opinion that there is no reason for the proposed legislation, and that it ought to be actively opposed if there be included in its scope any other closed vessels than those for generating steam used for power.

The Smoke Question—The Committee are assured that the sanitary authorities of the city of Manchester now make a clear distinction between the offence of the emission of black smoke from boiler fires used for power, and smoke emission from furnaces used directly in various manufacturing processes. The former is regarded as inexcusable, but as to the latter, each case is considered on its merits, and a certain latitude is accorded, opportunity for improvement being given. The executive are glad to be able to say that the printed "Observations" of the Chemical and Allied Industries Association for the year 1898 show a marked general improvement as regards smoke emission in comparison with previous years.

THE UTAH SALT TRADE IN 1898.

THE state of trade in Utah salt district has not been very flourishing during the past year, at the beginning of which the stocks of solar evaporated crude salt totalled 85,000 tons, so that naturally there was not room for any great production during the year. There has been a great falling off in the demand for ore-reduction purposes in the neighbouring mining industries. The salt marketed from current production and stocks may be summarised thus:—

	Tons.
Refined salt, artificially evaporated	600
,, ,, solar evaporation	9,500
Crude salt for stock feeding	3,000
,, ,, sacked or bulk for general use	11,500
Mined rock salt	1,000
Artificial ,, ,, ...	400
Total.....	26,000

The value of this amount was practically £24,000. The railway freightage amounted to £5,000. The prices of the various products vary considerably; thus crude chlorinating salt has averaged 3s. 2d. per ton; stock-feeding salt, 12s. 6d. per ton; refined, £2. per ton; mined rock, 4s. 2d. to 6s. 3d. per ton; and artificial rock about £1. 15s. per ton.

Early in last spring the refinery of the Inter-Mountain Salt Company was burnt down, and this led to the business of this Company being united with that of the Inland Crystal Salt Co., under the title of the latter, the joint Company also taking over the control of a plant—Nephi—formerly known as the Nebo Salt Manufacturing Co. This amalgamation was followed by an advance in price. Kansas salt has invaded the Eastern Colorado markets, but the superiority of the Utah domestic product practically sets-off the advantage which the Kansas producers gain by their lower working costs. The markets for Utah salt cover the following territory at present:—West Nebraska, Colorado, Wyoming, Utah, Idaho, Central and West Montana, Oregon, Washington, Central and North California, and Nevada.

Correspondence.

*** We do not hold ourselves responsible for the opinions expressed by our correspondents.*

SUPERPHOSPHATE TABLES.

(To the Editor of the Chemical Trade Journal.)

Sir,—In the "Tables for Superphosphate Manufacturers," given in your issue of the 28th inst., it is evidently assumed that one molecule of oxide of iron (Fe_2O_3) requires one molecule of sulphuric acid. I have always considered it necessary to allow three times this proportion of acid, according to the equation—

$$Fe_2O_3 + 3H_2SO_4 = Fe_2(SO_4)_3 + 3H_2O,$$

and similarly with alumina. I should be glad to learn from the writer of the article on what equations he bases his calculations for Tables III. and IV.

Yours, etc.,

30th January, 1899. Manufacturer.

Selected Correspondence.

SULPHIDE REDUCTION (NEW PROCESS), LIMITED.

(To the Editor of The Financial News)

Sir,—There is a proverb about fools rushing in which it would be well for some to bear in mind with reference to the recent rise in these shares. As an instance of an unaccountable and unjustifiable rise in value it would, I think, be hard to beat the way in which Sulphide Reduction have jumped up to over 60s. this last week or so. Some six weeks ago the shares were being offered at 8s. 9d., and I myself bought a lot at 10s., which, I am pleased to say, I have now sold at a handsome profit. But what has happened lately to so enhance the value of these shares? Absolutely nothing, so far as I am aware. The prospects of the company—though the financial outlook is not too pleasing—are certainly encouraging; but a company cannot live and thrive on prospects alone.

Take the balance sheet. The only tangible asset shown therein is the one-quarter interest in the French syndicate—itself in its infancy, or shall we say cradle? Far be it from me to "crab" Mr. Ellershausen's process; it is, no doubt, a good one; exactly how good it is hard to say, as Professor Threlfall, whose report I enclose for your perusal, is decidedly guarded in his utterances, and his opinion does not seem to be given in its entirety. But with the Ashcroft fiasco as an object lesson (and let it be remembered that the Ashcroft process was far more cracked up at the time, and by qualified experts, too), would it not be wise for the speculative investor to pause before bidding fancy prices for shares of a company whose dividends are so very much *in posse* rather than *in esse?* I enclose my card, and am—Yours truly,

Sceptic.

To the Editor of the Financial News.

Sir,—I have read the letter from Mr. S. Cowper-Coles on the above problem, and in your issue of to-day's *Financial News* I also read the chairman's speech in your report of the meeting of the Sulphide Reduction (New Process), Limited, and, further, I read the speeches delivered on the same subject at the meeting of the Mount Reid Company. I applied for and was granted patents in 1888 for the reduction of sulphide complex ores by the furnace process. The United States and Queensland at first refused patents, but eventually granted them, and American metallurgists borrowed from the patent the hot blast and evolved pyretic smelting in about 1890. Wet processes combined with electrolysis so far as known, including those with which my name is identified, and for which I was granted patents in 1892, have proved to be failures when tried on a commercial scale; but the same cannot be said of smelting. A furnace 81 feet high and 19½ feet at the top of the bosh, working at a temperature of 1,200 to 1,400 degrees Fahr., and with a blast pressure of 5 lb. to 7 lb. to the square inch, smelted continuously for months 2,000 tons per week of ores containing up to 5 per cent. of lead and zinc sulphides, and produced as a by-product an average of 35 tons of metallic lead per week running over 100 oz. of silver per ton. The loss was great, but then there was no baffled condensation plant, and an analysis of the flue dust taken from the down commers showed the following: PbO 13·137. ZnO. 35·73. Mn_2O_3. 4·946. Fe_2O_3. 29·885. $K_2O + Na_2O$. ·820, CaO. trace, MgO. trace, SiO_2 6·790 sulphuric acid trace, carbonic acid trace, and carbonaceous residue 7·330.

These oxides are readily saleable. Again, it is well-known to those who follow the smelting problem that an improved furnace is now treating sulphide ores containing up to 15 per cent. zinc with success, recovering the zinc as an oxide, and it would follow that in a properly-designed furnace with condensation plant the sulphide problem is not so difficult as it is made to appear.—Yours faithfully,

H. R. Lewis.

Finsbury Circus Buildings, E.C., January 30th.

ANSWERS TO CORRESPONDENTS.

P. H. (Berlin).—We shall be pleased to do so.

S. E. C. L.—We cannot find any reference to the price you mention.

P. D. (Lille).—(*a*) Their address is B. W. and Co., 18/19, Fenchurch-street, London E.C. (*b*) We can hardly advise on this point. Try a small advertisement.

A. M. (Lille).—'Ironclad" is not the name of a syndicate. The word was used as an adjective, to indicate the secrecy maintained by the members of the combine. We do not know the meaning of "pulperia goods."

EXPORTS OF ALKALI AND BLEACH IN 1898.

THE following returns, which are taken from the official foreign and colonial statistics of the United Kingdom, give the amount and value of alkali and bleaching materials shipped to the undermentioned countries for the year ending December 31st, 1898, as compared with December, 1897:—

ALKALI.

Port.	1897.	1898.	1897.	1898.
	Cwts.	Cwts.	£	£
Russia	238,100	198,266	68,312	57,900
Sweden and Norway	97,500	132,835	20,261	29,975
Germany	176,200	137,670	40,904	33,325
Holland	146,000	116 714	27,942	24,665
France	58,900	61,973	20,114	21,715
Spain and Canaries	335,100	330,912	109,297	107,182
Italy	240,700	278,050	69,943	82,388
United States	1,925,400	855,393	439,706	169,221
Australasia	220,900	215,991	66,786	65,715
British North America	181,300	193,670	44,550	50,608
Other countries	1,353,000	1,249,749	371,588	363,911
Total	4,973,100	3,771,223	1,279 403	1,006,605

BLEACHING POWDER, ETC.

Port.	1897.	1898.	1897.	1898.
	Cwts.	Cwts.	£	£
United States	754,300	738,016	236,886	194,309
Other countries	412,700	385,674	133,928	116,808
Total	1,167,000	1,123,690	370,814	311,117

Trade Notes.

The New Birmingham Retort House.—The Birmingham Corporation are building the largest retort house in the world, outside of London, in which are to be erected 108 beds of "slopper" retorts to carbonise 1,600 tons of coal per day, and the New Conveyor Co., Ltd., Swethwick, have been entrusted with the contract for the machinery. The contracts for similar automatic coal and coke handling machinery have also been placed with the New Conveyor Co., Ltd., for the gas works at Stockholm, Burslem, Stretford, Manchester, Jersey, and Swansea.

A Benzene Ring.—It is reported from Hamburg that as the result of a conference of manufacturers which has just been held at Cologne, it has been decided to form what is virtually a big benzene ring. The Trust, which has been joined by some thirty leading producers in Germany, Belgium, Luxembourg, and Switzerland, is to last for three years, and embraces a consumption of 35,000,000 kilos. The members of the ring declare that the combination is the inevitable outcome of the action of the Standard Oil Company in putting up the price of the raw article to an exorbitant figure; thereby forcing them to put themselves in the position to make a corresponding increase in the price of benzene.

Dangerous Trades.—The Dangerous Trades Committee appointed by the Home Office, consisting of Mr. H. J. Tennant, M.P (chairman), Mrs. May Edith Tennant, Dr. Thomas Oliver, and Mr. Hamilton P. Smith (secretary), have been this week at the Grand Hotel, Manchester, continuing their inquiry into the dangerous trades carried on in the district, with the view of ascertaining the conditions of work as they affect the health of the operatives. A large number of trades have already been investigated, and the following are the industries and processes now being inquired into:—Basic slag works and manufacture of silicate of cotton, flour mills, licking of labels for reels in thread mills, dyeing with arseniate of soda, manufacture of grindstones and emery wheels, the use of lead in various forms in print and dye-works, and the manufacture of salt. Evidence is being taken and visits are being paid to various works in Manchester, Stockport, Rochdale, and Bolton. At the close of the inquiry the Committee are to report what, if any, special rules should be made under section 8 of the Factory and Workshops Act of 1891 for the protection of the operatives in these industries.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are quiet at 8d. for both grades. There is nothing fresh to report in carbolic acids, which keep steady without change in prices, and much the same may be said of naphthas. Creosote is an active market. Pitch is firm and is moving satisfactorily at 24s. 9d. to 25s., f.o.b. East Coast, and 22s. to 23s. West Coast.

There has been a distinct falling off in the demand for sulphate of ammonia, and the price has dropped at all ports. For February/June, Becton quotation is £10 2s. 6d. Closing prompt values are :—London (outside makes), £10. 6s. 3d. ; Hull, £10. 5s. ; and Leith, £10 5s.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade there is a fair amount of business being done both for home and export, and prices are more steady all round. Caustic soda is firm at recent quotations, nearest spot values being f.o.b. Liverpool as follows :—77 % £7. 12s. 6d , 74% £7. 7s. 6d., 70% £6. 17s. 6d., 60% £5. 17s 6d. per ton, 10 ton lots. For ammonia alkali general demand is good, and works are well engaged with orders. Soda crystals and bicarbonate are firm. For bleaching powder there is more inquiry, and a good volume of business in hand, price being £4. 5s. to £4 10s. softwoods, f.o.r., makers' works, and £5. to £5. 5s. hardwoods, f.o.b. Liverpool. Chlorates unchanged in position and value, soda at 3¾ d. and potash at 3½d. per lb. In sulphate of copper the price continues to advance with the metal, and the market is to-day firm at £22. 15s. per ton ; £23. 5s. to £23. 10s. being quoted for March/April shipments. Sulphur, £4. 12s. 6d. bulk, f.o.r. For saltcake the demand is more active and price firmer at 28s. 6d. to 30s. per ton, f.o.r. Potash, caustic and carbonate, are moving freely, and prices are unaltered. Brown acetate of lime is firm ; good American at £5. 5s. to £5. 7s 6d. c.i.f. ; grey, £7. 15s. per ton. Acetic acids are steady. White powdered arsenic is firmer, stocks being reduced, and best brands commanding 5s. per ton advance in price at £16. 10s. to £16s. 15s. f.o.r. Garston, &c. Prussiate of potash and soda are rather dearer at 7¼d. and 5⅜d. per lb respectively. In cyanide there is good business doing, and price firm at 1s. 1d per lb. Oxalic acid quiet at 3d. per lb. Bichromate of potash and soda, 3½d. and 2¾d. per lb. respectively. Tin and zinc salts are dearer.

THE METAL MARKETS.

LONDON, WEDNESDAY.—Pig iron : Scotch warrants closed at 55s. 0d. ; Middlesbrough, 48s. 0d. cash ; and hematite, 60s. 0d. Copper firm : Chili bars, G. O. B.'s and G. M. B.'s, closed at £70. 2s. 6d. to £70. 7s. 6d. cash, and £70. 2s. 6d. to £70. 7s. 6d. three months. Tin steady : Straits closed at £112. 10s to £113. 0s. cash and £112. 0s. 0d. to £112. 10s. 0d. three months ; Australian, £113. 5s. 0d. ; English ingots, £116. Lead firm : Spanish, £15. 0s. 0d. ; English, £15. 0s. 0d. ; Silesian spelter, ordinary, £26. 5s. 0d. Nickel, 1s. 2½d. Antimony, £37. 10s. Quicksilver : First hands, £8. 5s. ; second hands, £8 4s. 0d. *Copper shares* steady : Cape, 4⅜ to 4½ ; Copiapo, 3⅞ to 3 1/16 ; Libiola, 2⅝ to 2⅞ ; Mason and Barry, 3⅞ to 4⅛ ; Rio Tinto, 38 15/16 to 39 1/16 ; Tharsis, 8⅜ to 8⅝.

GLASGOW, WEDNESDAY.—Market firm, and a good business. Scotch done at 55s. 0d., 55s. 3d., 54s 11½d., 55s 1½ d., and 55s 0½d. cash ; also at 55s. 3½d., 55s. 6d., and 55s. 3½d. month ; buyers, 55s. cash ; sellers ½d. more. Cleveland done at 48s. 1½d to 48s. 0½d. cash, and 48s. 3d. month ; buyers, 48s. cash ; sellers, 48s. 1d. Cumberland hematite done at 59s. 11½d., 60s. 1d., and 60s. cash ; also at 60s. 2d. to 60s. 3d. month ; buyers, 59s. 11½d. cash ; sellers, 60s.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

OILS.—Palm oil keeps firm, and there has been a fair amount of business doing, sales including Benin at £21. 5s. Olive is steady as far as prices are concerned, but there is very little doing at current values. Linseed oil is firmly held for 18s. 9d. to 19s , Liverpool makes in export casks. Cottonseed is in fairly good request, and holders are firm at 15s 9d. to 16s. per cwt. for Liverpool refined. Castor oil steady : The inquiry for first pressure French and good seconds Calcutta is moderate at 3d., and 3 3/16d. to 3⅛d. respectively, though sellers of French for shipment are inclined to advance their price. Tallow is very firm, and South American has been done at 26s. Resin is easier generally, and only in poor request at that. Spirits of turpentine keep very steady, being in fairly good demand at 33s. per cwt. Petroleum is dull : American at 6⅝d. to 8d., and Russian refined at 6d. per gallon.

CAKES.—There is a fairly good inquiry going on for spot parcels of American Western linseed, and the market remains steady at recent rates, viz., £6. 17s. 6d. to £7. 2s. 6d., but other imported descriptions are quieter in tone, with sellers of River Plate at £7. 7s. 6d. to £7. 10s., of Bombay at £7. 5s. to £7. 7s. 6d., and of Russian at £7. 10s. to £7. 12s. 6d., being respectively the turn of 2s. 6d. and 5s per ton easier. Liverpool makes, however, continue to meet a fairly good demand, and values are well maintained at £8. 5s to £8. 10s. per ton, according to brand. For good to choice brands of American decorticated cottonseed the value is still given at £6. to £6. 5s., according to quality, with a good trade doing thereat, and Liverpool makes are also selling to a fair extent at previous rates, viz., £6. 10s. to £6. 15s. per ton, according to brand. In undecorticated Liverpool makes trading is still on a fairly active basis, and the recent quotation of £4. 17s. 6d to £5. 5s., according to brand, is well maintained, and Egyptian are also in fair request on the spot at the recent full quotation of £4 15s per ton for prime quality on the quay.

COLOURS.—Prices are steady, and practically without change. Ochres : Oxfordshire—common £10., medium £12 , best £15. ; Derbyshire—common 40s., medium 50s., best 60s. ; Welsh—best 9 s. ; seconds, 50s., and common, 18s. ; Devonshire, 40s. to 45s. ; French, J.C., 65s. Umber : 40s. to 45s. White lead : £16. Red lead unchanged. Venetian red : £6. to £10. Cobalt : Prepared oxide, 9s. 9d. ; black, 9s. ; blue, 6s. Oxide of iron : Common, £7. ; medium, £10. ; finest, £20. Zinc oxide : £22. 10s. to £25. ;

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—The markets are decidedly improved ; in fact the prices of all oils have advanced, and the advance is prompted more by a healthy demand than by speculation. The imports for the week have been :—Linseed, 7,303 qrs., against 9,144 qrs. for the corresponding period of last year ; rapeseed, *nil*, against 4,258 qrs. ; cottonseed, 2,899 tons, against 8,327 tons ; oilcake, 197 tons, against 177 tons. The exports for the week have been :—Linseed oil : Denmark, 1 ton ; Germany, 4 tons ; Norway, 16 tons ; United States, 9 tons ; total, 30 tons. Cotton oil : Belgium, 54 tons ; Denmark, 2 tons ; France, 38 tons ; Germany, 17 tons ; Holland, 23 tons ; total, 134 tons. Linseed oil has advanced fully 15s. per ton, being quoted firm 17s. per cwt. spot ; 16s. 7½d. May/August ; and 16s. 6d. February-March ; boiled and refined is £1. to £1. 10s. per ton extra. Refined cotton oil, 13s. 9d. spot naked, being an advance of 10s. per ton upon the week ; February/April, 13s. 10½d. to 14s. 2d. ; May/August, 14s 3d. to 14s. 7½d. (naked) ; Crude ditto, 12s. 7½d., spot ; casks, £1. and ordinary barrels, £1. 10s. per ton extra. Turpentine has advanced further, being quoted anything to 34s. Castor oil, cold drawn pharmaceutical, 28s. 6d. in barrels, 3 1/16d. per lb. in cases ; first pressure, 25s. 6d. in barrels, 3d. per lb. in cases ; second pressure, 24s 6d. in barrels, 2⅞d. per lb. in cases. Oleines have advanced further 15s. per ton upon last week's prices. Olive oil, £32. to £34. 10s. per tun. Olive oil soap unchanged. Tallow in limited supply. Cod oil quiet. Resin unchanged.

CAKES.—Feeding stuffs remain firm and dearer, which makes much fresh business difficult. Linseed, 95% pure, £8. 5s per ton ; oil cakes, (linseed), £7. 5s. per ton ; Russians, £7. 10s. to £7. 12s. 6d. Cotton cakes, best makes, £5. 5s ; seconds, £4 17s. 6d. to £5. ; decorticated cakes, £6. 10s. Rape cakes, Black Sea, £4. 5s. ; East India, £5 5s.

PAINTS.—Leads from £19. to £20. for white ; red leads, £16. to £17. per ton. Dry mineral colours £4. to £8. per ton. Paints from £10. per ton. Black varnish £5. 10s. per ton.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

Sulphate of ammonia has long been pretty steadily on the up-grade, but during the past ten days a change seems to have been coming about. It is a not unusual circumstance for this article to harden perceptibly as the days draw in to the close of the month because of the delivery necessities of dealers just at that time, but here we are, at the last day of January, and the tendency is still in the direction of easing away rather than the reverse. Sellers talk of £10. 7s. 6d. for prompt Leith price, and there may be some of them who would take even less. Sulphate of copper continues to move upwards by strides. The point of £23. has been touched, and there is every probability at present of the figure going higher. Bleaching powder holds to its recently bettered position, and the other lines show little or no change of value.

Chief prices current are :—Soda crystals, £2. 7s. 6d. to £2. 12s 6d. nett, Tyne ; soda ash, £4. 2s. 6d. to £4. 15s. nett, Tyne ; white alkali, £5. to £5. 10s. nett, Tyne ; alum in lump, £4. 5s. to £4. 15s. nett, Glasgow ; caustic soda, white, 74° £7. 7s. 6d., 70/72° £6. 17s. 6d., 60/62° £6., and cream 60/62° £6 , all nett, Liverpool ; bleaching powder, 35/37°, £5. to £5. 10s. nett, Tyne ; saltcake, 28s 6d. ; borax, English refined, £16., and boracic acid, £26. nett, Glasgow ; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s., nett, Liverpool ; bichromate of potash, 3½d., less 6% for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow) ; bichromate of soda, 2¾d., less 6% for Scotch and English deliveries (for export, 2½d.

nett, f.o.b. Glasgow); chlorate of potash, 3½d., less 5% Liverpool; nitrate of soda, 7s. 6d. to 7s. 9d.; sulphate of ammonia, £10. 7s. 6d. prompt f.o.b. Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £22. 10s. to £23. early delivery, less 5% Liverpool; paraffin scale, hard, 1⅞d. to 2d. per lb., and soft 2d. per lb.; paraffin wax, 120° semi-refined, 2¼d. to 2½d. per lb.; paraffin spirit (naphtha), 8d. to 9d. per gal; paraffin oil (burning), No. 1, 6½d.; and crystal, 7d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 15s. to £5. 5s., 885° £5. 10s. to £6., and 890/895° £6. 5s. to £6. 10s. Week's imports of sugar at Greenock were *nil.*

TYNE CHEMICAL REPORT.

TUESDAY.

The chemical trade is quiet without alteration in prices, but the business doing is fully up to the average for this time of the year. Soda crystals are steady at £2. 12s. 6d. per ton, gross weight, locally. Caustic soda, 70%, £7., and 76/77%, £7. 15s. to £8. per ton. Sulphur scarce at £4. 15s. to £4. 17s. 6d. per ton, f.o.b.

Bleaching powder, softs, £5. 0s. per ton, nett; do., hards, £5. 5s. per ton, nett; caustic soda, 76/77%, £8. and 70%, £7. 0s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75°Tw., £2. 12s. 6d. per ton, nett; do., 100°Tw., £3. per ton, nett; do., 140°Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. 0d. per ton, nett; blanc fixe, £6. 10s. per ton, nett; chloride of barium, refined crystals, £6. 15s. 0d. per ton, nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt continues firm at 9s. 6d. per ton, f.o.b. Tees, and in good demand

COALS.—In the coal trade the demand is good, the consumption of gas coals and coke being very full at present. Bunker coals are also firmer. To-day's prices are:—Best Northumbrian steam, 10s. 6d. to 11s. per ton; second qualities, 9s. 6d. to 10s. per ton; small steam, 4s. 3d. to 4s. 6d. per ton; bunker coals, 8s. to 8s. 6d. per ton; gas coals, 10s. to 11s. per ton; household coals, 10s. 6d. to 11s. per ton; coke, 18s. 6d. to 21s. per ton.

New Companies.

Bell Brothers, Ltd.—CAPITAL, £1,000,000. in 50,000 preference shares of £10 each, and 100,000 ordinary shares of £5. each. This company has been formed to acquire the business of Bell Brothers, Ltd., incorporated in 1895, to adopt an agreement with the said company and its liquidators, and to carry on the business of iron-masters, iron and steel manufacturers, chemical manufacturers, and colliery owners.

Giffre Electro-Chemical and Power Co., Ltd.—CAPITAL, £140,000. in £1. shares. This company has been formed to acquire all or any of the shares and stock of a French company called "Societe Electro-chimique du Giffre," to adopt an agreement with the General Water Power, Ltd., to work, develop and turn to account any electrical, chemical, or electro-chemical processes. Registered office, 11, Cornhill, E.C.

IMPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.

Week ending January 21st.

Acetate of Lime—

U. States,	348 bgs.	Gillespie Brs. & Co.
,,	2,128	R. E. Drummond & Co.

Acetone—

Austria,	11 brls.	D. T. Domeier & Co.
,,	15 dms.	Thames S. T. & L. Co., Ld.

Alkali—

Belgium,	214 c.	Leach & Co.
France,	140	J. Barber & Co.
Belgium,	400 cks.	A. Wallaee & Co.

Alum—

Holland,	45 pks.	J. White

Ammonium Phosphate—

Holland,	48 cks.	Brit. Non-Fiammable Wood Co.

Antimony Ore—

Turkey,	15 t.	G. Smith & Son
Melbourne,	20	J. J. Pratt & Son

Asbestos—

U. States,	£5	Rosenberg, Loewe & Co.
,,	55	L. & I. D. Jt. Co.
Germany,	200	Craven & Co.
Belgium,	4	T. H. Lee
France,	129	Mory & Co.
Italy,	208	Page, Son & East

Barytes—

Belgium,	203 pks.	W. Harrison & Co
,,	531	J. L. Lyon & Co.
Germany,	85	,,

Basic Slag—

Belgium,	50 t.	Perkins & Homer

Bleaching Powder—

Holland,	62 cks.	J. M. Steel & Co.
France,	63	,,

Bone Meal—

E. Indies,	693 t.	A. Hunter & Co.

Bones—

Melbourne,	12 t.	Anning & Cobb

Caoutchouc—

Straits,	88 c.	L. & I. D. Jt. Co.
France,	11	,,
Zanzibar,	34	,,
,,	9	Hale & Son
Germany,	24	Wallace Brs.
Zanzibar,	7	Arbuthnot, Ewart & Co.
Straits,	160	Prop. Bull Wf.
,,	340	Anderson, Weber & Smith
,,	384	Huttenbach & Co.
,,	50	Elkan & Co.
,,	130	E. Boustead & Co.
,,	78	W. Pope & Co.
Sydney,	6	McIlwraith, McEacharn & Co.
Columbia,	15	Hoare, Wilson & Co.
Guatemala,	15	Major & Field
France,	106	Procter Brs.
B. W. I.,	150	Prop. Bull Wf.
Zanzibar,	7	Hale & Son
P. E. Africa,	26	L. & I. D. Jt. Co.
France,	16	Major & Field
China,	4	W. M. Smith & Sons
U. States,	7	Hale & Son
Straits,	83	Kleinwort, Sons & Co.

Carbolic Acid—

Germany,	50 pks.	J. G. Back

Castor Oil—

Belgium,	110 brls.	J. Harrison
France,	30	Beresford & Co.
Italy,	10 cs.	Grimwade, Ridley, & Co.
E. Indies,	50	H. A. Litchfield & Co.
Italy,	10	Serena & Co.
France,	25 cks.	L. & N. W. Ry. Co.
,,	15 pks.	Lucas & Spencer's Wf., Ld.
Italy,	30 cs.	Davy Hill, Son & Co.

Caustic Potash—

Germany,	84 dms.	J. M. Steel & Co.
France,	18	Petri Brs.
,,	22	W. E. Cole

Chemicals (*otherwise undescribed*)

Germany,	£36	H. Lambert
,,	744	L. & I. D. Jt. Co.
Belgium,	16	John Cockerill Line
,,	1,379	T. H. Lee
Germany,	496	A. & M. Zimmermann
France,	91	Mory & Co.
Germany,	18	Argo S. S. Co.
,,	190	Craven & Co.
Norway,	168	R. Greening
M'b'urne,	1,400	L. & I. D. Jt. Co.

Cream of Tartar—

Holland,	14 pks.	Kirkpatrick, Barr & Co.
France,	2	J. W. Cook & Co., Ld.
,,	2	W. Balchin, Ld.
Italy,	25	W. C. Pantin
France,	5	B. & F. Wf. Co., Ld.
,,	2	H. Johnson & Sons
,,	10	C. Christophersen
,,	16	F. C. Devon & Co.

Disinfectants—

Germany,	£39	A. & M. Zimmermann
Holland,	60	R. W. Greeff & Co.

Dyestuffs—

Argols

Italy,	1,552 pks.	B. Jacob & Sons
Italy,	180	Thames S. T. & L. Co., Ld.
Austria,	93	,,

Extracts

Austria,	102 pks.	Fellows, Morton & Co., Ld
France,	1	Prop. Hay's Wf.
U. States,	164	Skilbeck Brs.

Gambier

Straits,	228 pks.	Leach & Co.
,,	225	Prop. Hay's Wf.
	1,505	Adamson, Gilfillan & Co.
,,	250	Hoare, Wilson & Co.

Indigo

E. Indies,	319 chts.	Parsons & Keith
,,	138	Arbuthnot, Latham & Co.
,,	12	Croysdale & Co.
,,	5	T. Barlow & Bro.
,,	8	J. Owen
,,	5	92 pks. A. B. Curtis & Co.
,,	60	Hatton, Hall & Co.
,,	5	R. Von Glehn & Sons
,,	36	L. & I. D. Jt. Co.
Belgium,	1 cs.	John Cockerill Line

Madder

France,	3 pks.	Skilbeck Brs.

Myrabolams

E. Indies,	485 pks.	Dalton & Young

Naphthaline

Belgium,	222 pks.	Fleming's Oil & Chem. Co., Ld.

Quebracho

Germany,	200 pks.	Fuerst Brs.

Shumac

Italy,	100 pks.	L. & N. W Ry. Co.
,,	800	Beresford & Co.
,,	500	J. Kitchen, Ld.
,,	600	H. Johnson & Sons
,,	200	J. E. Scott
,,	500	W. Shelcott & Sons

Tanners' Bark

Natal,	19 t.	A. & W. Nesbitt
,,	51	Boutcher, Mortimore & Co.
,,	54	Vokins & Co., Ld.
,,	8	Flack, Chandler & Co.

Tannin

Canada,	165 pks.	Boutcher, Mortimore & Co.

Valonia

A. Turkey,	6 c.	M. D. Co.
,,	10 t.	Barrow & Bro., Ld.
,,	100	Boutcher, Mortimore & Co.
,,	25	W. France & Co., Ld.
,,	130	A. & W. Nesbitt

Farina—

Holland,	200 pks.	J. Barber & Co.

Glucose—

U. States,	2,539 pks.	7,958 c.	R. G. Hall & Co.
,,	1,729	1,086	L. & I. D. Jt. Co.
,,	1,000	1,000	Fellows, Morton & Co.
,,	—	690	H. Johnson & Sons
,,	750	750	Pickford & Co.
,,	50	600	50 brls. E. & T. Pink
,,	2,500	2,500	Perkins & Homer
,,	100	502	J. Keiller & Son, Ld.
,,	500	500	Johnson Saccharum Co.
,,	100	500	L. Norman & Co., Ld.
,,	50	293	Thames S. T. & L. Co., Ld.
,,	200	1,100	Oblenschlager Brs.
,,	500	500	Beck & Pollitzer
,,	1,500	1,500	Pearce, Pelly, & Co.
,,	50	314	C. Barnard
,,	100	474	Page, Son & East
,,	500	500	C. Thompson & Co.
,,	150	951	Lipton & Co.
Canada,	500	1,000	Bellamy's Wf., Ld.

Glue—

Austria,	£275	Beresford & Co.
Belgium,	60	J. E. Kitton
,,	20	Leach & Co.
,,	560	T. M. Duche & Sons

Germany, 96 H. Lambert
" 75 L. & I. D. Jt. Co.
" 35 M. Dk. Co.
" 10 W. J. Davies & Sons
France, 100 "
" 90 Burnett Brs. & Sons
" 15 J. Harrison
Holland, 98 Phillipps & Graves

Glue Stock—
Germany, 7 bls. L. & I. D. Jt. Co.
" 121 W. Balchin. Ld.
" 11 Hicks, Nash, & Co.
" 117 bgs L. & N.-W. R. Co.
N.S.W., 36 bls. T. J. & T. Powell
" 119 Anning & Cobb
" 34 Culverwell, Brooks, & Co.
" 38 Hicks, Nash, & Co.
" 6 Flack, Chandler, & Co.
France, 59 B. & F. Wf. Co., Ld.
" 92 Schenker & Co.
Belgium, 251 pks. Hicks, Nash, & Co.
" 44 bls. D. C. Thomas & Sons
E. Indies, 61 W. Balchin, Ld.
Straits, 66 Hicks, Nash, & Co.

Glycerine—
France, £360 J. W Cook & Co., Ld
" 35 J. L. Lyon & Co
" 300 H. Hill & Sons
Germany, 70 T. H. Lee

Kainit—
Germany, 86 t. F. W. Berk & Co., Ld.

Litharge—
Germany, 12 pks. Butler's Wf., Ld.
" 29 Petri Brs.
Holland, 55 Spies Brs.
" 6 J. Barber & Co.

Manure—
Holland, 50 t. Hollinghurst & Co.
Germany, 30 Cornwall, Son, & Co

Methyl Alcohol—
U. States, 29 dms. H. Wallace & Co.
Germany, 39 W. Izard
France, 9 Lister & Biggs
Norway, 10 cks. T. Jones & Co

Mica—
E. Indies, £990 W. M. Smith & Sons
" 1,330 E. Davis & Co.
Germany, 8 Craven & Co.

Molasses—
U. States, 500 brls. 2,751 c. J. White
" 465 2,420 J. W. Cook & Co., Ld.
" 200 1,251 J. Forsey
" 25 120 C. & E. Morton
" 25 138 Deering & Robottom
Nickerie, 743 bgs. 1,660 R. J. & J. Kirke

Ochre—
France, 20 pks. Vokins & Co., Ld.
Holland, 18 Phillipps & Graves

Paraffin Scale—
U. States, 6,249 brls. Anglo-American Oil Co.

Paraffin Wax—
U. States, 239 brls. Lon. & Til. Ltge. C. & D. Co.
" 200 H. Hill & Sons
" 300 cs. Anglo-American Oil Co.
Rangoon, 800 brls. H. Hill & Sons

Pitch—
N. Russia, 57 brls. F. & S. Chiesman & Co.
" 350 Fellows, Morton, & Co.
France, 12 Callender's Crucible & Co., Ld.
" 31 cks. H. Hill & Sons
Germany, 5 pks. Captain Baumann

Plumbago—
Germany, 37 cks. B. Gallaway
Ceylon, 272 brls. J. Thredder, Son, & Co.
" 68 Doulton & Co., Ld.
" 72 H. J. Perlbach & Co
E. Indies, 38 Montgomerie & Workmann
Italy, 115 J. Thredder, Son, & Co.
Belgium, 17 cs. T. Ronaldson & Co.

Potassium Bicarbonate—
Holland, 9 cks A. & M. Zimmermann

Potassium Carbonate—
France, 70 c. A. Zumbeck & Co.
" 45 Petri Brs.
" 40 W. E. Cole
Germany, 100 Petri Brs.

Potassium Chlorate—
Belgium, 20 kgs. E. Allen

Potassium Cyanide—
Germany, 20 cs. J. Owen

Potassium Permanganate—
Germany, 20 kgs. H. Lorenz
" 25 R. W. Greeff & Co.

Potassium Prussiate—
Belgium, 31 cks. T. H. Lee

Potassium Sulphate—
Belgium, 3 pks. Sawer, Sons, & Co.

Pyrites—
Spain, 2,862 t. C. Tennant, Sons, & Co.

Rosin—
Belgium, 100 brls. J. West & Son
U. States, 500 T. Nickels & Co.

Rosin Oil—
Belgium, 10 cks. D. C. Thomas & Sons

Saltpetre—
Germany, 100 bgs. Phillipps & Graves
" 44 cks. J. Hall & Son
E. Indies, 55 bgs. Perkins & Homer

Smalts—
Germany, 2 pks. Butler's Wf., Ld.

Soap—
France, £100 H. F. Love
" 24 Flageollet & Co.
Portugal, 143 J. W. Cook & Co., Ld.
U. States, 200 W. Dixon
" 5,984 Capes & Self

Soda Crystals—
Belgium, 215 c. Wilson & Co.
Holland, 3 H. Wallace & Co.

Starch—
Belgium, 158 pks. Leach & Co.
" 350 E. & T. Pink
" 155 T. H. Lee
" 820 T. Ronaldson & Co.
" 290 Becker & Wagner
" 161 F. Claydon & Co.
" 440 Fellows, Morton, & Co.
Germany, 137 Argo S. S. Co.
Holland, 1,510 Little & Johnston
" 147 Phillipps & Graves

Stearine—
Holland, 10 bls. J. Owen
" 68 bgs. H. Hill & Sons
France, 129 "
Belgium, 13 "

Sulphur—
Spain, 300 t. J. Forster
Italy, 200 B. Jacob & Sons
" 23 J. Kitchin, Ld.
" 5 Fuerst Brs.
" 15 G. Boor & Co.
" 6 F. C. Devon & Co.
" 100 Johnson & Hooper, Ld.
" 120 brls. J. B. Cree

Sulphuric Acid—
Holland, 10 pks. Perkins & Homer

Talc—
Spain, £120 Blackwell & Co.

Tar—
N. Russia, 90 cks. Linck, Moeller, & Co.

Tartar—
Italy, 39 pks. Howards & Sons
" 2 W. C. Bacon & Co.

Tartaric Acid—
Holland, 12 pks. Kirkpatrick, Barr, & Co.
" 1 F. C. Devon & Co.
Belgium, 4 "
" 4 J. Harrison

Turpentine—
N. Russia, 105 brls. F. & S. Chiesman & Co.
" 104 R. L. Archibald

Ultramarine—
Germany, 20 pks. Phillipps & Graves
" 4 D. Storer & Sons
Holland, 10 T. Palmer
" 11 Haeffner, Hilpert, & Co.

Varnish—
Germany, 10 pks. Capes & Self
Belgium, 1 John Cockerill Line

Waste Salt—
Germany, 210 t. Agricultural & Horticul. Assoc., Ld.

White Lead—
Holland, 58 pks. Burrell & Co.
Belgium, 56 T. & W. Farmiloe, Ld.
Germany, 28 W. A. Rose & Co.

Wood Pulp—
N. Russia, 12 pks. W. Relph & Co.
Holland, 70 Henderson, Craig, & Co.
" 280 T. H. Lee
Canada, 1,379 A. E. Reed & Co.
Norway, 480 Christophersen, Andrews, & Co.
" 1,600 J. Sharp
" 2,585 Johnsen & Jorgensen
Sweden, 1,444 W. G. Taylor & Co., Ld.
" 340 J. W. Cook & Co., Ld.
Germany, 406 W. Friedlaender
U. States, 2,300 Henderson, Craig, & Co.
" 283 A. E. Reed & Co
" 541 W. G. Taylor & Co., Ld.

Zinc Chloride—
Holland, £50 H. Lorenz

Zinc Oxide—
U. States, 500 pks. M. Ashby, Ld.
Holland, 100 Spies Brs. & Co.
" 12 Robinson, Roberts, & Co.
Belgium, 2 Wilson & Co.
Germany, 50 Prprs. Dowgate Dk.
" 500 Soundy & Sons

LIVERPOOL.

Week ending January 19th.

Alumite—
Sydney, 300 t. Australian Alum Co.

Antimony Ore—
Antofagasta, 338 bxs.

Barytes—
Hamburg, 12 cks.
Rotterdam, 100 bgs.
Antwerp, 31 cks. 100 bgs

Bone Meal—
Bombay, 890 bgs. W. & R. Graham & Co.
Karachi, 2,592

Bones—
Alexandria, 500 bgs.

Castor Oil—
Marseilles, 28 cs. Bancroft & Co., Ld.
" 28 cks. 5 cs. 185 brls.

Colours—
Stettin, 20 cks. Clayton & Jowett
" 25 Evans, Sons & Co.
" 100

Cottonseed Oil—
Colon, 100 brls.
N. Orleans, 2,000
New York, 110

Cream of Tartar—
Bordeaux, 41 cks.

Dyestuffs—
Argols
Patras, 2 brls.
Cochineal
Las Palmas, 29 bgs. Roberts, Evans & Co.
" 6 Canary Is. Trdg. Co.
Cutch
New York, 250 bxs. Ralli Brs.
Extracts
Fiume, 279 brls. The Oak Extract Co., Ld.
Fustic
Kingston, 733 pcs.
Myrabolams
Bombay, 734 bgs. E. D. Sassoon & Co.
" 1,310 D. Sassoon & Co.
Valonia
Patras, 141 bgs.

Glucose—
Baltimore, 200 brls.
St. John, N.B., 717 Colby & Co.
Portland, M., 300

Glue—
Fiume, 200 bgs. Klee & Sankey
" 200
Rotterdam, 17 cks. 4 cs. 20 bgs.
Baltimore, 15

Glycerine—
Marseilles, 40 dms.

Lactic Acid—
Boston, 12 brls. J. Taylor
5 kgs. & Co.

Lead Acetate—
Hamburg, 1 ck.

Limestone—
Antwerp, 1 crt.

Manganese Ore—
Coquimbo, qty

Mineral White—
Fiume, 620 bgs.

Molasses—
Colon, 1,000 brls.
N Orleans, 2,000

Ochre—
Rouen, 104 cks. Co-op. W'sale Society, Ld.

Paint—
New York, 17 cs.
Amsterdam, 10 dms

Paraffin Scale—
Baltimore, 200 brls.

Paraffin Wax—
Philadelphia, 200 cs. Thompson & Bedford
" 820 brls. Anglo-American Oil Co.

Phosphate Rock—
Br'nsw'k, Ga., 928 t.

Phosphates—
Bona, 1,800 t.
Pensacola, 279½ Cie Crutsaldes Phosphates

Phosphoric Acid—
Rotterdam, 15 cks.

Potash—
Rouen, 50 cks. Co-op W'sale Society, Ld.
Portland, M., 25 brls.
Dunkirk, 2 cks. 5 dms.

Pumice Stone—
Teneriffe, 45 brls. J. Goldsworthy & Son

Pyrites—
Huelva, 2,939 t. Matheson & Co.

Rosin—
New York, 26 brls.
Carrabella, 3,437
Br'nsw'k, Ga., 5,635

Saltpetre—
Hamburg, 8 cs.

Soap—
Marseilles, 4 cs. G. G. Mackay
" 160 bxs.
Boston, 20 J. Thompson

Soap Lyes—
Marseilles, 44 dms.

Soapstone—
Bordeaux, 250 bgs. Geo. G. Blackwell, Sons & Co.
Genoa, 100

Sodium Nitrate—
Iquique, 16,113 bgs. H. Watson & Co.
Junin, 9,574 G. C. Pobeel & Co.

Starch—
Fiume, 200 bgs.
Portland, M., 100
Baltimore, 400
New York, 200 sks.
St. John, N.B., 600 Colby & Co.
Amsterdam, 80 bxs.
Antwerp, 200 cs.

Stearine—
Philadelphia, 200 tcs.
Antwerp, 13 bgs. J. T. Fletcher & Co.
" 1 bx.

Sulphur—
Catania, 13 brls.

Talc—
Barcelona, 100 sks.

Tallow—
Philadelphia, 120 tcs. M. Schlutz
" 100
Boston, 637 75 brls.
S'dn'y, N.S.W., 343 cks. Lever Brs., Ld.
Zarate, 82 pps. J. Nelson & Sons
Boston, 600 tcs. Lowell Rdg. Co.
Pensacola, 250 J. McKee & Co.
" 500
Boston, 75 Bigland, Son & Co.

Tartaric Acid—
Rotterdam, 10 cks.

Ultramarine—
Rotterdam, 20 cks. 5 cs.

Varnish—
New York, 20 brls. W. A. Warren

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Waste Salt—
Hamburg, 102 bgs.
White Lead—
Rotterdam 25 cks.
Wood Pulp—
Halifax, 900 bls. A. Rice & Co.
Boston, 297 bdls Lever Brs., Ld.
" 50 crts. 9 cs.
Zinc Ashes—
Genoa, 183 bgs. Vivian & Sons
Zinc Oxide—
New York, 50 brls.
Antwerp, 20
Zinc White—
Stettin, 50 cks.

MANCHESTER.

Week ending January 21st.

Acetic Acid—
Rotterdam, 5 brls.
Alizarine—
Rotterdam, 36 cks. 25 brls.
Ammonium Acetate—
Rotterdam, 2 brls.
Barytes—
Antwerp, 50 bgs.
Rotterdam, 100 6 brls. 1 ck.
Chemicals *(otherwise undescribed)*
Rotterdam, 3 cs.
Colours—
Antwerp, 3 brls. 12 pks.
Ghent, 2
Rotterdam, 102 cks 9 cs. 6 bxs. 169 brls.
Glucose—
New York, 50 brls.
Glue—
Antwerp, 60 bls.
Rotterdam, 130 bgs.
Limestone—
Antwerp, 5 crts.
Paint—
New York, 18 kgs.
Paraffin Scale—
New York, 800 brls.
Phosphorus—
Antwerp, 19 cks.
Pyrites—
Huelva, 1,612 t.
Rosin—
New York, 25 brls.
Soap—
Rotterdam, 3 cs.
Starch—
Antwerp, 20 cs.
Rotterdam, 40
St. John's, N.B., 4,700 bgs.
Wood Pulp—
Gothenburg, 3,691 bls. 27 rolls
Skien, 4,555 W. H Stott & Co.
Zinc Sulphate—
Rotterdam, 2 brls.

HULL.

Week ending January 21st.

Acetic Acid—
Bremen, 33 crbys. Veltmann & Co.
Acids—
Amsterdam, 1 cs. Hull & Netherlands S. S. Co.
Bari, 71 Wilson, Sons, & Co., Ld.
Albumen—
Libau, 5 cs. Bailey & Leetham, Ld.
Aniline Oil—
Rotterdam, 9 cks. Hull & Netherlands S. S. Co.
Barytes—
Amsterdam, 53 cks. Hull & Netherlands S. S. Co.
Antwerp, 39 Bailey & Leetham, Ld.
53 bgs.
" 100 cks. H. F. Pudsey
" 221 pks. Wilson, Sons, & Co., Ld.
Bremen, 38 cks.
Rotterdam, 92 Hull & Netherlands S. S. Co.
Bleaching Powder—
Antwerp, 24 cks. Wilson, Sons, & Co., Ld.
Borax—
Hamburg, 30 cks. Wilson, Sons, & Co., Ld.
Castor Oil—
Leghorn, 20 cs.
Marseilles, 5
Chemicals *(otherwise undescribed)*
Hamburg, 6 pks. Wilson, Sons, & Co., Ld.
Leghorn, 50 cs. "
" 5
Colours—
Antwerp, 4 cks. Bailey & Leetham, Ld.
" 10 Wilson,
72 brls. Sons, & Co., Ld.
Bremen, 4 cks Veltmann & Co.
Dunkirk, 13 brls. Wilson, Sons. & Co., Ld.
Hamburg, 6 pks. "
" 200 cks.
Rotterdam, 3 / 11 brls. / 245 pks. Hull & Netherlands S. S Co.
Cream of Tartar—
Rotterdam, 1 ck. Hull & Netherlands S. S. Co.
Creosote Salts—
Rotterdam, 17 cks. Hull & Netherlands S. S. Co
Dyestuffs—
Alizarine
Rotterdam, 1 brl. Hull & Netherlands S. S. Co
Extracts
Hamburg, 1 ck. Bailey & Leetham, Ld.
Trieste, 20 brls. Wilson Sons, & Co., Ld.
Indigo
Rotterdam, 10 brls. Hull & Netherlands S S. Co.
Shumac
Palermo, 2,4[illegible]9 bgs.
Trieste, 10 bls. Wilson, Sons, & Co., Ld.
Farina—
Harlingen, 100 bgs. Hull & Netherlands S. S. Co.
Glue—
Rotterdam, 15 bgs. Hull & Netherlands S. S. Co.
Glue Stock—
Reval, 11 pks.
Naphthaline—
Antwerp, 12 bgs.
Ochre—
Bremen, 2 cks.
Pumice Stone—
Messina, 54 pks. Wilson, Sons, & Co., Ld.
Potash—
Dunkirk, 45 cks. Wilson, Sons, & Co., Ld.
Saltpetre—
Hamburg, 32 kgs. Wilson, Sons, & Co., Ld.
Soap—
Bari, 49 cs.
Boston, 2
Marseilles, 3
Soda—
Genoa, 100 bgs. Wilson, Sons, & Co., Ld.
Sodium Fluoride—
Hamburg, 1 ck. Bailey & Leetham, Ld.
Starch—
Amsterdam, 476 cs. Hull & Netherlands S S. Co
Ghent, 210 Wilson, Sons, & Co., Ld.
Stearine—
Rotterdam, 1 cs. Hull & Netherlands S. S. Co.
Sulphur—
Catania, 425 bgs. Wilson, Sons, & Co., Ld.
50 t.
" 817 pks.
Copenhagen, 10 bgs. "
Tallow—
Antwerp, 63 brls. Wilson, Sons, & Co., Ld.
Boston, 408 "
Dunkirk, 89 cks. "
Tar—
Marseilles, 59 cks.
Tartaric Acid—
Rotterdam, 2 cks. Hull & Netherlands S. S. Co
Turpentine—
Fiume, 1 cs. Wilson, Sons, & Co., Ld.
Libau, 12 brls. "
" 52
" 57 Redfern & Chatterton
Ultramarine—
Bremen, 23 cks.
Rotterdam, 14 pks. Hull & Netherlands S. S. Co.
2 cks
Varnish—
Bremen, 4 pks.
White Lead—
Antwerp, 37 cks Bailey & Leetham Ld.
Ghent, 7 brls Wilson, Sons, & Co., Ld.
Rotterdam, 57 cks. Hull & Netherlands S. S. Co.
Wood Pulp—
Bergen, 224 pks. Wilson, Sons, & Co., Ld
Christiania, 1,574 "
Hamburg, 240 "
Hango, 215 bls. J. Good & Sons
" 196
Rotterdam, 14 pks. Hull & Netherlands S. S. Co.

GLASGOW.

Week ending January 26th.

Barytes—
Hamburg. 50 bgs.
Bleaching Powder—
Rotterdam, 43 cks. J. Rankine & Son
Colours—
Hamburg, 1 cs.
Rotterdam, 10 cks. 1 / 9 bxs. / 39 brls. / 50 pks. J. Rankine & Son
Dyestuffs—
Alizarine
Rotterdam, 48 cks. 10 brls.
Aniline
Rotterdam, 22 cks. 4 bxs. J. Rankine & Son
Amsterdam, 1 cs. "
Aniline Colours
Hamburg, 15 cks. 5 cs.
Extracts
Baltimore, 5 brls.
Indigo
Rotterdam, 1 chst. J. Rankine & Son
" 1
Madder
Marseilles, 7 cks.
Shumac
Palermo 450 bgs
Tannin
Hamburg, 4 cks.
Glue—
Rotterdam, 10 bgs.
Glycerine—
Hamburg, 1 cs.
Ochre—
Rotterdam, 4 cks. J. Rankine & Son
Paint—
Christiania, 3 cs.
Potassium Carbonate—
Hamburg, 30 cks.
Potassium Prussiate—
Amsterdam, 2 cks. J. Rankine & Son
Rosin—
Savannah, 4,210 brls.
Salt—
Hamburg, 2 cs.
Soap—
Boston, 104 brls.
Newport News, 66
Soap Lyes
Marseilles, 20 dms.
Starch—
Rotterdam 150 cs. J. Rankine & Son
Stearine—
Amsterdam, 62 bgs.
Tartar—
Bordeaux, 23 cks.
Tartaric Acid—
Marseilles, 4 cks.
Turpentine—
Savannah, qty. L. & J. MacLellan
Waste Salt—
Hamburg, 266 cks.
White Lead—
Rotterdam, 20 cks. J. Rankine & Son
" 70
Wood Pulp—
Christiania, 705 bls.
Drammen, 1,465 83 cs.
Gothenburg, 40 Honeyman & Co.
" 678
Zinc Oxide—
New York, 50 brls
Rotterdam, 15 cks. J. Rankine & Son
Zinc White—
Rotterdam, 25 cks. J Rankine & Son

TYNE.

Week ending January 21st.

Antimony Ore—
Hamburg, 200 cs. Tyne S. S. Co.
Asbestos—
Amsterdam, 10 bls. Wm. Swanston & Sons
Barytes—
Rotterdam, 400 bgs.
Colours—
Antwerp. 5 cks. Tyne S. S. Co.
Dyestuffs *(otherwise undescribed)*
Antwerp, 605 bgs. Tyne S. S. Co.
Limestone—
Antwerp, 13 crts. Tyne S. S. Co.
Phosphate Rock—
Fernandina, 2,500 t.
Saltpetre—
Hamburg, 20 cks. Tyne S. S. Co.
Soap—
Christiania, 3 cs.
Varnish—
Antwerp, 4 brls. Tyne S. S. Co.
Wood Pulp—
Bergen, 6 bxs. P. H. Matthiessen & Co.

GOOLE.

Week ending January 18th.

Alizarine—
Rotterdam, 143 cks. 3 cs.
Alkali—
Calais, 12 cks.
Aniline—
Hamburg, 19 cks. 3 cs.
Rotterdam, 50 3
Antimony—
Boulogne, 3 cks.
Barytes—
Antwerp, 50 bgs.
Rotterdam, 60
Caoutchouc—
Boulogne, 8 cks.
Colours—
Boulogne, 3 cks.
Hamburg, 5 5 cs.
Dyestuffs *(otherwise undes.)—*
Amsterdam, 3 cks. 1 cs.
Boulogne, 97 pks.
Rotterdam, 27 47
Farina—
Delfszyhl, 1,025 bgs.
Glucose—
Calais, 20 bgs.
Glue—
Antwerp, 6 cks. 10 bs.
Boulogne, 3
Indigo—
Rotterdam, 8 chts.
Phosphates—
Calais, 1,530 bgs.
Dunkirk, 1,600
Ghent, 750

Potash—
Calais, 31 dms
Dunkirk, 18
Saltpetre—
Rotherdam, 100 bgs.
Waste Salt—
Hamburg, 500 bgs.

GRIMSBY.

Week ending January 21st.

Caoutchouc—
Hamburg, 5 cs. 1 ble.
Rotterdam, 2
Chemicals *(otherwise undescribed)*
Hamburg, 11 cks. 2 cs. 3 crts.
Colours—
Antwerp, 3 cks. 107 pks.
Hamburg, 2 2 cs. 140
Barytes—
Antwerp, 40 bgs.
Indigo—
Rotterdam, 13 cs. 3 cbts.
Salt—
Hamburg, 100 bgs.
Soap—
Rotterdam, 80 cs.

EXPORTS OF CHEMICAL PRODUCTS

AT

THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Period ending January 25th.

Acids—
Singapore, 6 cs. £12
Durban, 15 28
Alkali—
Bombay, 4 t. 13 c. £38
Ammonia—
Auckland, 2 cs. £25
Cape Town, 1 15
Rotterdam, 2 40
Calcutta, 15 20 pks. 183
Trinidad, 8 c. 15
Durban, 2 t. 4 62
Bombay, 4 cyldrs. 50
Fremantle, 91
Ammonium Carbonate—
Yokohama, 2 t. 12 c. £61
Bremen, 1 26
Paris, 2 14 81
Cologne, 1 2 26
Ammonium Chloride—
Philadelphia, 10 t. 2 c. £187
Auckland, 1 13 32
Lisbon, 5 cks. 21
Bourgas, 10 15
Cologne, 10 45
Ammonium Sulphate—
Ghent, 40 t. £121
Hamburg, 100 1,000
Madras, 2 10 c. 32
Antwerp, 100 1,075
Rotterdam, 27 290
Jamaica, 3 31
Bremen, 50 500
Arsenic—
Reval, 5 t. £97
Hiogo, 2 36
Otago, 1 cs. 41
Bleaching Powder—
Bombay, 20 cs. £10
Rio de Janeiro, 2 c. 6
E. London, 2 t. 16
Boracic Acid—
Hankow, 9 c. £14
Borax—
Perth, 11 c. £21
Madras, 16 29
Calcium Bisulphite—
Durban, 13 c. £8
Calcium Chloride—
Fremantle, 6 t. 5 c. £20
Carbonic Acid Gas—
Halifax, 20 cs. £100
Durban, 5 35
Caustic Potash—
Bombay, 1 t. £22
Canterbury, 2 1 c 84
Caustic Soda—
Philadelphia, 67 t. £400
Cape Town, 18 c. 14
Durban, 1 11 21
Delagoa Bay, 2 18
Chemicals *(otherwise undescribed)*
Auckland, 2 cs. 84 pks (pt.) £144
St. John, N.B., 14 26
Sydney, 12 11
Yokohama, 20 kgs 34 cs. 205
Amsterdam, 5 31
E. London, 7 21
Hamburg, 15 11 pks. 11 cks. 271
Melbourne, 15 cs. (pt.) 17
Bombay, 16 cs. 37 pks. 217
Rangoon, 3 18
Madras, 10 dms. 15
Durban, 4 19
Boston, 107 316
Antwerp, 100 bgs. 163
Jamaica, 150 1 15
Rotterdam, 6 50
Dunkirk, 21 75
Marseilles, 37 cks. 43
San Francisco, 35 pks. 105
Mauritius, 1 22
Rotterdam, 5 kgs. 29
Brussels, 3 cks. 23
Teneriffe, 25 t. 145
Perth, 122 pks. (pt.) 242
Wellington, 10 16
Citric Acid—
Hiogo, 3 c. £19
Libau, 5 31
Reval, 1 t. 10 175
New York, 1 4 136
Amsterdam, 10 60
Hamburg, 10 60
Bombay, 3 21
Karachi, 1 cs. 7
Oporto, 5 cks. 29
Genoa, 3 5 kgs. 116
Coal Products—
Alizarine
Lisbon, 5 cks. £79
Reval, 6 cs. 280
Aniline Oil
New York, 22 dms. £600
Anthracene
Rotterdam, 420 cks. £597
Benzine
Sydney, 80 dms. £33
Benzol
Hamburg, 48 cks. £75
Carbolic Acid
Calcutta, 1 cs. £5
Boston, 180 cks. 1,377
New York, 16 125
Cologne, 48 240
Alexandria, 1 brl. 6
Dyes
Boulogne, 4 cks. 12 pks. £102
Naphtha
Sydney, 32 dms. £17
Naphthaline
Hamburg, 100 bgs. £55
Tientsin, 8 cs. 12
Yokohama, 10 kgs. 5
Pitch
Aviles, 1,210 t. £1,437
Stettin, 310 419
Gijon, 480 617
Dunkirk, 1,090 1,475
Antwerp, 1,653 2,163
Terrewzen, 454 495
Canterbury, 3 brls. 20 dms. 6
Brussels, 50 43
Mauritius, 10 kgs. 5 18
Prussian Blue
Rotterdam, 8 cks. £35
Ghent, 4 10
Pyridine
Hamburg, 3 dms. £82
Tar
Launceston, 22 dms. £5
Wellington, 4 cks. 20 11
Mauritius, 30 7
E. London 450 42
Auckland, 56 8
Hamburg, 250 brls. 214
Tar Oil
Hamburg, 15 cks. £13
Coal Products *(otherwise undes.)*—
Cape Town, 10 brls. £15
Copper Sulphate—
Bordeaux, 20 t. £395
Gibraltar. 1 2 c. 19
Launceston, 1 28
Cream of Tartar—
Nelson, 10 c. £40
Malta, 3 17
Brisbane, 11 55
Wellington, 3 13
Fremantle, 10 38
Cape Town, 5 19
Disinfectants—
Pt. Elizabeth, 3 t. £51
Durban, 180 cks. 3 cs. 65
E. London, 100 pks. 20
Alexandria, 2 39 20 dms. 57
Cape Town, 100 103
Calcutta, 138 pks. 28
Madras, 204 101
Bombay, 954 179
Blantijo, 17 12
Canterbury, 100 dms. 50
Wellington, 5 cs. 19
Jamaica, 110 45
Paris, 10 15
Auckland, 10 15 pks. 64
Melbourne, 20 27
Sydney, 8 51 19 240
Dried Blood—
New York, 9 c. £20
Glycerine—
Hamburg, 20 t. £500
New York, 21 18 c. 650
Manure—
Jersey, 67 t. 12 c. £196
Guadeloupe, 325 3,000
Rouen, 35 130
Havre, 25 80
Bordeaux, 25 110
Barfleur, 130 850
Guadeloupe, 6 12 180
Demerara, 40 320
Bordeaux, 25 88
Jersey, 163 1,007
Martinique, 80 570
Las Palmas, 63 16 566
Nitric Acid—
E. London, 10 cs. £24
Pearl Ash—
Brisbane, 12 c. £9
Phosphates—
Fremantle, 150 t. £326
Potash
Auckland, 3 c. £5
Potassium Bicarbonate—
Cape Town, 5 c. £10
Potassium Chlorate—
Sydney, 3 c. £5
Calcutta, 12 kgs. 21
Potassium Cyanide—
Auckland, 10 t. 100 cs. £1,670
Durban, 20 215
New York, 300 1,456
Townsville, 100 1,067
Cartagena, 2 23
Fremantle, 5 8 c. 660
Potassium Prussiate—
Melbourne, 6 c. £29
Prussiate Soda—
Antwerp, 10 t. 3 c. £462
Hamburg, 5 1 236
Saltpetre—
Auckland, 10 c. £10
Canterbury, 10 10
Sheep Dip—
B. Ayres, 1,500 cs. £3,375
Durban, 3 25 dms. 22
E. London, 50 10
Silicate Soda—
Wellington, 5 t. £23
Soap—
Adelaide, 5 t. 7 c. £102
Soda—
Napier, 2 t. £22
Madras, 16 c. 32
Beira, 1 2 7
Cape Town, 3 18 16
Soda Ash—
Hiogo, 13 t. 18 c. £62
Soda Crystals—
Geraldton, 3 t. 5 c. £13
Sodium Bicarbonate—
Pt. Elizabeth, 2 t. £12
Sydney, 1 4 c. 23
Sodium Nitrate—
Hiogo, 20 t. 2 c. £159
Sulphur—
Nelson, 2 t. £15
Durban, 60 cs. 14
Mauritius, 10 c. 5
Sulphuric Acid—
Madras, 13 cs. £12
Superphosphates—
Calicut, 20 t. £85
Tartaric Acid—
Nelson, 3 c. £20
Yokohama, 2 t. 1 220
Hiogo 5 28
New York, 2 cs. 10

LIVERPOOL.

Week ending January 25th.

Alum—
Bilbao, 16 c. £5
Syra, 2 t. 14 13
Alexandria, 7 35
Sydney, 1 5
Trebizonde, 1 10 9
Tetuan' 1 5 1 q. 6
Sydney, 1 10 5
Geelong, 1 10 7
Melbourne, 1 1 5
Lisbon, 43 cks. 39
Ammonia—
Santos, 19 c. 2 q £19
Ammonia (Anhydrous)—
Hankow, 7 c. 2 q. £12
Ammonium Carbonate—
Yokohama, 8 t. 14 c. £234
Kobe, 1 27
Pernambuco, 1 3 q. 5
Havana, 10 13
Genoa, 1 2 30
Marseilles, 1 26
Oporto, 10 cks. 26
Ammonium Chloride—
Gijon, 10 c. £17
B. Ayres, 3 t. 1 1 q. 108
Montreal, 9 8
Genoa, 1 1 1 33
Ammonium Sulphate—
Valencia 209 t. 9 c. £2,153
Cheribon 50 500
Alicante, 20 10 220
Philadelphia, 100 9 1,036
Messina, 5 53
Genoa, 109 5 1,078
Teneriffe, 57 1 625
Las Palmas, 60 8 640
Newport News, 101 1,021
Gd. Canary, 144 10 1,275
Antimony—
Tongshan, 2 c. £5
Bleaching Powder—
Alexandria, 7 cks.
Baltimore, 251
Barcelona, 15
Bombay, 17 cs.
Boston, 132
Calcutta, 160
Cleveland, 20
East Peppered, 43
Genoa, 180
Havana, 50 brls.
Johannesburg, 133
Lockland, 18
Madras, 10 cs.
Merriton, 25
Mimice, 90
Milwaukee, 155
Monterey, 32
Nantes, 66 pks.
New York, 378 45 brls.
Oporto, 73
Pernambuco, 2
Philadelphia, 213
Pt Natal, 20 dms.
Rotterdam, 48
St. John, N.B., 10

Syra, 5
Valencia, 20 bgs.
Valleyfield, 15
Venice, 15
Vera Cruz, 26

Boracic Acid—
Hiogo, 2 t. 10 c. £65

Borax—
Sydney, 1 t. 2 c. 1 q. £19
Rotterdam, 2 32
Antwerp, 2 33
Ghent. 1 6 2 21
New York, 1 15
Toronto, 12 18 3 220
Natal, 2 28
Melbourne, 1 14
M. Video, 6 4
Frontera, 5 4
Lisbon, 7 cks. 17

Calcium Chloride—
Sydney, 10 t. £25
Rangoon, 2 1 c. £5
Gothenburg, 3 1 8
Sydney, 9 2 20

Carbolic Acid—
Sydney, 1 t c. £18
Singapore, 2 t. 5 2 q. 21
Yokohama, 6 3 295
Hiogo, 5 11 2 308
Odessa, 1 12 110
Rouen, 5 12 357

Caustic Potash—
Chicago, 3 t. 5 c. £85
Bay City, 11 14 330

Caustic Soda—
Alexandria, 30 dms.
Antwerp, 34
Bahia, 30
Barcelona, 140 60 cks.
B. Ayres, 25
Calcutta, 300
Chicago, 50 10 brls.
Corinto, 14
Genoa, 270
Germany, 14
Hamburg, 7
Havana, 159
Hiogo, 637
Leghorn, 70
Manila, 50
Malaga, 15
Maracaibo, 20
Mauritius, 25
Messina, 35
Milan, 30
Monterey, 60
M. Video, 85
Nantes, 75
Naples, 35
N. Orleans, 350
New York, 50
Normanton, 30
Odessa, 200
Oporto, 36
Para. 30
Parahyba de Norte, 30
Penang 20
Pernambuco, 24
Piræus, 82
Rangoon, 18
Rio de Janeiro, 30
Rio G. do Sul, 80
Salonica, 11
Samarang, 50
San Sebastian, 50
Seville, 175
Savanilla, 10
Smyrna, 40
Sousse, 50
Sydney, 18
Tampico, 224
Tarragona, 80 66 cks.
Vera Cruz, 70
Yokohama, 100

Chemicals *(otherwise undescribed)*
Philadelphia, 12 t. 14 c. 3 q. £345
Genoa, 2 16 2 52
Seville, 3 4 2 45
M. Video, 21 4 58
Havre, 12 8
Kingston, Ja., 3 cs. 7

China Clay—
Baltimore, 240 cks.
Boston, 360
Newport News, 524 150 bgs.
Parahyba de Norte, 100
Philadelphia, 1,226
Portland, 100
Vera Cruz, 40

Chromic Acid—
Hamburg, 10 c. £30

Coal Products—
Aniline Salts
Genoa, 5 cks.
New York, 19 kgs.
Philadelphia, 20 cks.
Piræus, 4 15 brls.
Creosote Oil
Bordeaux, 200 cks.
Dyes
New York, 58 cks.
Pitch
Bilbao, 56 brls.
Cette, 533 t.
La Rochelle, 771
Pontevedra, 50
Venice, 202 hf brls.
Tar
Gaboon, 10 cks.
Lagos, 10 brls.
Muscalla, 6
Philadelphia, 70

Copper Sulphate—
Ferrol, 5 c. 1 q. £5
Bordeaux, 138 t. 12 1 2,456
Cette, 109 5 3 2,210
Genoa, 15 2 3 268
Leghorn, 50 2 3 805
Accra, 1 18
Lagos, 9 3 9
Sierra Leone, 9 3 9
Venice, 9 17 3 173
Bone, 11 19 218
Naples, 54 12 930
Lisbon, 13 201
Oporto, 19 5 3 215
Casale, 19 1 18
Palermo, 17 3 321
Nantes, 17 11 1 294
Messina, 28 6 517
New York, 1 12 28
Rangoon, 10 9
Vera Cruz, 7 6
Callao, 3 1 56
Talcahuano, 3 10 68
Madras, 10 10
Rouen, 10 185
Brindisi, 7 1 1 125

Disinfectants—
Bonny, 7 c. £7
Cape Town, 10 15
Rangoon, 18 dms. 8
Bombay, 11 3 q 6

Dried Blood—
Teneriffe, 10 t. £72

Dyestuffs—
Aniline Colours
Lisbon, 1 ck. 1 kg.
Extracts
Boston, 10 cks.
Lisbon, 1
Logwood
Alexandria, 70 bgs.
Lisbon, 1 ck.

Glycerine—
Melbourne, 1 t. 9 c. 2 q. £85
Rotterdam, 1 3 44

Gypsum—
Lisbon, 5 t. 10 c. 2 q. £16

Iron Sulphate—
Bilbao 9 c. 1 q. £3

Magnesia—
Manila, 1 cs.
Patras, 168
Rosario, 8

Magnesium Chloride—
Genoa, 9 t. 9 c. £25

Magnesium Sulphate—
Lisbon, 75 bgs

Manure—
Gd. Canary, 11 t. 10 c. £95
Las Palmas, 3 24
Teneriffe, 5 52

Oxalic Acid—
B. Ayres, 1 t. £33

Paint—
Algoa Bay, 140 kgs.
Cartagena,, 40
Cienfuegos, 3 cks.
Gibraltar, 51 21 dms.
Havana, 6 cks.
Johannesburg, 1 cs.
Kewasunde, 5
Kurrachee, 1
Lagos, 7 dms.
Loando, 5 cks.
Manaos, 6
M. Video, 1 13
New York, 5
Old Calabar, 20
Panama, 32
Para, 30 46
Porto Plate, 6
St. Louis, 85 brls. 5
Santos, 1
Valencia, 40 dms.
Valparaiso, 3 cks.
Vera Cruz, 20 cs.
Verwey, 3 cks.

Painters' Colours—
Havana, 8 kgs. 9 brls. 12 cks.
Kurrachee, 67 2 cs.
Lahore, 24
Leghorn, 2 bxs.
Lisbon, 2

Paraffin Wax—
Catacola, 10 bgs.
Fiume, 10
Leghorn, 100
Odessa, 50
Paris, 10 cs.
Patras, 22
Rio de Janeiro, 6
Sourabaya, 15 dms.

Phosphorus—
Hiogo, 4 t. 10 c. £820
Hong Kong, 6 67
Shanghai, 2 17 460

Potash Salts—
Reval, 2 t. 10 c. 3 q. £145

Potassium Bichromate—
Alexandretta, 1 t. 10 c. £48
Alexandria, 1 3 q. 33
Bilbao, 1 4 42
Larnaca, 7 12
New York, 11 3 17
Piræus, 1 2 37

Potassium Carbonate—
Chicago, 2 t. 17 c. £57
Para, 1 10 2 q. 26

Potassium Chlorate—
B. Ayres, 2 t. 10 c. £81
Copenhagen, 3 90
Gothenburg, 5 132
Havana, 6 11
Konigsberg, 10 308
Libau, 15 450
Pernambuco, 1 33
San Francisco, 2 10 75

Potassium Cyanide—
Zacatecas, 4 c. 2 q. £18

Potassium Oxalate—
Bilbao, 2 c. 1 q. £5

Potassium Prussiate—
Genoa, 4 cks. £58

Potassium Sulphate—
Alexandria, 1 t. 11 c. 2 q. £17
Alicante, 10 1 80

Rochelle Salts—
B. Ayres, 5 c. 3 q. £18

Salt—
Baltimore, 490 t.
Bathurst, 32
Bonny, 70
Boston, 200
B. Ayres, 277 17 c.
Calcutta, 581 100 cs.
Camercons, 1,000 bgs. 113 t. 2 c.
C. C. Castle, 12 10
Cape Town, 274 sks.
Cardenas, 10
Cienfuegos, 90
Conakry, 81 4
Egwanga, 60 5
Elboy, 10 14
Havana, 100
Kingston, Jam., 30
Lagos, 135
Landana, 15
Melbourne, 80 100 cs. 2,750 bgs.
M. Video, 200 150 c.
Montreal, 2,953 bxs.
N. Orleans, 550 t.
New York, 100
Nuevitas, 40
Old Calabar, 247 16
Pt. Elizabeth, 17 17
Pt. Natal, 5
Rangoon, 686
St. John's, N.B., 80
St. John's, 10
Sherbro, 100 8
Sierra Leone, 50
Sydney, 425
Trinidad, 35 6
Winnebah, 12 10
Yokohama, 50 cs.

Salt Cake—
Lisbon, 10 t. 9 c. £23

Saltpetre—
Bilbao, 8 c. £8
Cartagena, 6 t. 2 3 q. 123
Para, 1 10 32
Pernambuco, 5 14 128

Sheep Dip—
B. Ayres, 3,030 dms. £1,640
19 t. 10 c. 1 q.
E. London, 2 18 55
Natal, 3 14 88

Soap—
Accra, 120 bxs.
Algoa Bay, 20 160 cs.
Appam, 100
Assinee, 200
Attoabee, 50
Barbadoes, 434 1,116
Barberton, 6
Bayin, 200
Bluefields, 180
Bombay, 30
Boston, 30 pks.
Cameroons, 110
Cape Town, 350 100
Cardenas, 10
Cienfuegos, 10
Dakar, 25
Delagoa Bay, 50
E. London, 30
Gibraltar, 8
Gothenburg, 300
Gd. Canary, 10
Johannesburg, 505
Havana, 15
Malta, 34 80
Manila, 4
M. Video, 20
Naples, 6
New York, 35
Nuevitas, 10
Old Calabar, 1,232
Opobo, 2,240
Palma, 568
Penang, 400
Pt. Natal, 12
Quebec, 7
Rangoon, 1
Rotterdam, 270
St. Kitts, 304
St. Thomas, 535
Salt Pond, 80
Santa Antonio, 20
Sherbro, 100
Sierra Leone, 330
Simon's Town, 100
Singapore, 770
Valparaiso, 2
Winnebah, 100

Soda Ash—
Boston, 44 tcs.
B. Ayres, 200 cks.
Calcutta, 100 kgs. 268
Copenhagen, 332 bgs.
Corfu, 30 brls.
Genoa, 18
Gothenburg, 42
Kobe, 243
Mitylene, 150
New York. 500 50 tcs.
Philadelphia, 81 15
Piræus, 53
Rio G. do Sul, 240
Rotterdam, 400
Salonica, 60 brls.
Syra, 8
Venice, 100

Soda Crystals—
Bombay, 80 kgs.
Calcutta, 25 brls.
Canada, 10 cs.
Cape Town, 25
Malta, 20 brls. 50 cks.
New York, 140
Philadelphia, 140
Shanghai, 30

Sodium (Metal)—
Hamburg, 4 t. 10 c. £45

Sodium Bicarbonate—
Barcelona, 295 kgs. 5 cks.
Bombay, 20 bgs. 480 kgs.
Calcutta, 500
Demerara, 40
Genoa, 90
Havre, 2
Kobe, 1,000
Leghorn, 20 17
Nantes, 110
Naples, 150
New York, 10
Odessa, 195 2
Oporto, 20
Pt. Elizabeth, 20 brls.
Rangoon, 6
Rio de Janeiro, 20
Santos, 25
Trieste, 50
Trinidad, 20

Sodium Bichromate—
Sydney, 1 ck.
Sodium Carbonate—
New York, 140 brls.
Sodium Chlorate—
Reval, 60 bgs.
Sodium Hyposulphite—
Bilbao, 3 brls.
Sodium Oxide—
Trieste, 5 cks.
Sodium Sulphate
Boston, 15 cks.
Starch—
Lisbon, 3 cks.
Sulphur—

Boston,	25 t.	1 c.		£107
Sarpsborg,	149	12		608

Superphosphates—

Alexandria,	8 t.	1 c.	2 q.	£22
Cullera,	282	13		738
Genoa,	248	18	3	502
Gd. Canary,	40	10		122
Las Palmas,	65			239
Nantes,	197			1,397
Teneriffe,	20			70
Valencia,	150	3	2	350

Tartaric Acid –
Accra, 2 c. £6
Tin Oxide—
New York, 1 t. £95
Varnish –
Alexandria, 1 cs.
Antwerp, 10 cks.
Gijon, 2
Lahore, 3
M. Video, 1
Naples, 5
Para, 1
Porto Alegre, 5
Sourabaya, 4
White Lead—
Ambrizette, 4 cks.
Zinc Chloride—
Bombay, 5 t. 15 c. £77

MANCHESTER.

Week ending January 25th.

Alum—
Beyrout, 45 brls.
Gabes, 7
Tunis, 16
Ammonia—
Tunis, 2 kgs.
Aniline Colours—
Germany, 10 kgs. 2 cs.
Caustic Soda—
Beyrout, 20 dms.
Chemicals *(otherwise undescribed)*
Susa, 2 brls.
Coal Products—
Aniline Oil
Belgium, 6 pks.
Aniline Salts
Germany, 13 cks.
Naphthylamine
Germany, 49 cks
Pitch
Germany, 5,041 c.
Tar Salts
Newfairwater, 23 bgs.
Toluol
Belgium, 6 dms.
Germany, 20
Copperas –
Alexandria, 296 brls.
Beyrout, 35
Larnaca, 10
Farina—
Holland, 2 bgs.
Glue—
Boston, 2 cks.
Germany, 10
Linseed Oil—
Alexandria, 30 brls.
Boston, 1 ck.
Soap—
Holland, 1 bx.
Sodium Biarseniate—
Holland, 1 ck.
Sodium Bicarbonate –
Susa, 2 kgs.
Tunis, 35
Soda Crystals –
Susa, 7 cks.
Sodium Naphthionate—
Germany, 15 cks.
Sodium Silicate—
Sfax, 10 brls.
Starch—
Alexandria, 10 cks.
Tallow—
Alexandria, 48 brls.
Holland, 5 cks.
Turpentine—
Alexandria, 30 dms.
Varnish—
Gothenburg, 1 dm.
Zinc Chloride—
Holland, 7 cks.

HULL.

Week ending January 21st.

Alkali—
Drontheim, 10 cks.
Ammonium Sulphate—
Antwerp, 500 bgs.
Ghent, 292
Bone Ash—
Stockholm, 3 cks.
Caustic Soda –
Hango, 15 cks.
Chemicals *(otherwise undescribed)*
Amsterdam, 33 cks. 10 pks.
Christiania, 12
Copenhagen, 4 25 btls.
Danzig, 13 cs.
Gothenburg, 10 6
Hamburg, 2 225
Rotterdam, 136
Rouen, 12
Stockholm, 2
Cottonseed Oil—
Amsterdam, 415 c.
Antwerp, 1,025
Bordeaux, 600
Copenhagen, 52
Dunkirk, 69
Hamburg, 340
Rotterdam, 21
Rouen, 98
Creosote—
Hamburg, 2 cks.
Dyestuffs *(otherwise undescribed)*
Reval, 2 cks.
Glue—
Gothenburg, 5 bgs.
Linseed Oil—
Bergen, 88 c.
Christiania, 172
Copenhagen, 18
Hamburg, 88
New York, 180
Manure—
Dunkirk, 1,000 sks.
Painters' Colours—
Amsterdam, 2 pks.
Antwerp, 32 cks. 2
54 cs. 51 dms.
Bergen, 10
Bremen, 72 31 68
Copenhagen, 1
Danzig, 4
Gothenburg, 6 3 2
Hamburg, 9 4
Rotterdam, 13
Rouen, 36
Stockholm, 1
Phosphates—
Bordeaux, 212 t.
Pitch—
Antwerp, 331 t.
Dunkirk, 203
Soap—
Amsterdam, 135 cs.
Antwerp, 28
Christiania, 1
Stettin, 1
Tallow—
Antwerp, 87 cks.
Stettin, 15
Tar—
Amsterdam, 6 cks.
Dunkirk, 25
Varnish—
Amsterdam, 10 cks.
Antwerp, 2 1 cs.
Bremen, 2
Copenhagen, 2
Danzig, 4 dms.
Ghent, 2
Gothenburg, 1 3
Reval, 3
Rotterdam, 1
Stockholm, 2

GLASGOW.

Week ending January 26th.

Acetic Acid –
Jersey City, £45
Alum—
Bombay, £22
Ammonium Sulphate—

Baltimore,	55 t.	¾ c.
Hamburg,	151	10
New York,	50	19⅛
Valencia,	451	10½

Bleaching Powder—
Calcutta, 34 t. 7 c.
Carbolic Acid—
Amsterdam, £203
Rotterdam, 110
Chalk—
B. Ayres, £55
Coal Products—
Creosote
Bayonne, £930
New York, 450
Dyes
Calcutta, £26
Naphtha
Paris, £60
Tar
Christiania, £35
Penang, 240
Rangoon, 75
Copperas—
Bombay, 36 t. 6⅛ c.
Extracts—
Portugal, £23 7s.
Spain, £240
Farina—
Oporto, £100
Linseed Oil—
Cape Town, 18¾ c.
Christiania, 28 lbs.
Havana, 2 t. 13
Litharge—
Johannesburg, 2 t.
Logwood—
Portugal, £60
Paint—
New York £70
Painters' Colours—
Boston, £100
Calcutta, 652
Cape Town, 42
Havana, 96
Johannesburg, 36
Natal, 65
Rangoon, 447
Paraffin Wax—
Barcelona, £767
Bordeaux, 147
Christiania, 65
Marseilles, 50
Rouen, 83
Valencia, 218
Potassium Bichromate –
Amsterdam, £146
Boston, 392
Barcelona, 1,003
Montreal, 66
New York, 330
Paris, 249
Rouen, 67
Potassium Cyanide—
Johannesburg, £671
Sydney, 315
Potassium Prussiate –
New York, £125
Soap—
Calcutta, 1 t. 15 c.
Cape Town, 1 11¼
Rangoon, 2
Singapore, 2 5½
Transvaal, 3 5
Sodium Bichromate—
Barcelona, 3 t. 12 c.
Montreal, 3 3¾
Paris, 1 17¾
Reims, 5 1½
Rouen, 17 12
St. Die, 5 6
Starch—
Rotterdam, 49 t.
Sulphuric Acid—
Rangoon, £1,705
Penang, 28
Tallow—
Rangoon, 4 t. 15¾ c.
Rotterdam, 5 6
Transvaal, 2

TYNE.

Week ending January 21st.

Alkali—
Rotterdam, 2 t. 2 c.
Alumina Sulphate—
Rouen, 5 t. 2 c.
Antimony—
Antwerp, 2 t.
Genoa, 3
Hamburg, 1
Rotterdam, 5
Arsenic—
Odense, 1 t.
Barium Binoxide—
Rotterdam, 10 t. 14 c.
Rouen, 16 4
Barium Carbonate—
Copenhagen, 3 t.
Hamburg, 10
Bleaching Powder—
Aarhuus, 30 t. 3 c.
Antwerp, 10
Bergen, 5
Copenhagen, 6 1
Drontheim, 11 18
Caustic Soda—
Antwerp, 4 t. 18 c.
Copenhagen, 4 3
Hamburg, 20
Odense, 20 1
Seville, 30 6
Stavanger, 1 3
Litharge—
Copenhagen, 5 c.
Hamburg, 1 t. 5
Magnesia—
Hamburg, 1 t. 14 c.
Manganese—
Rouen, 1 t. 2 c.
Paint—
Antwerp, 1 t. 5 c.
Hamburg. 1
Pitch—
Rouen, 40 t.
Slag—
Rotterdam, 133 t.
Soda—
Rotterdam, 25 t. 2 c.
Sodium Sulphate—
Antwerp, 120 t.
White Lead—
Copenhagen, 1 t. 13 c.

GOOLE.

Week ending January 18th.

Chemicals *(otherwise undescribed)*
Hamburg, 2 cs. 50 dms.
Coal Products *(otherwise undes.)—*
Amsterdam, 15 cks.
Antwerp, 2 cs.
Boulogne, 5 2
Ghent, 1
Hamburg, 1
Rotterdam, 245
Dyestuffs *(otherwise undescribed)*
Hamburg, 2 cks.
Manure—
Ghent, 270 bgs.
Rotterdam, 482
Painters' Colours—
Antwerp, 2 cs.
Ghent, 7 cks.
Rotterdam, 15
Pitch—
Antwerp, 865 cs.

GRIMSBY.

Week ending January 21st.

Alkali—
Dieppe, 4 cs.
Ammonium Sulphate—
Rotterdam, 201 bgs.
Chemicals *(otherwise undescribed)*
Dieppe, 10 cs.
Malmo, 1 ck.
Coal Products *(otherwise undes.)—*
Dieppe, 108 cks. 5 cs.
Rotterdam, 25
Colours—
Malmo, 10 cks.
Painters' Colours—
Antwerp, 1 cs. 1 pk.
Dieppe, 2 cks.
Hamburg, 6

PRICES CURRENT.

WEDNESDAY, Feb. 2, 1899.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. *at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.*

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9	&	8/3
,, Glacial .. .. ,,		35/-	
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¼
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	9
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	0	11½
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	0
Arsenic, white powdered .. .. nett per ton	16	15	0
Alum, loose lump .. .. ,,	4	5	0
Alumina Sulphate (pure) .. .. ,,	3	15	0
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¼ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2¾
,, = 24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	19	0	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	10	6	3
,, ,, (grey) Hull .. .. ,,	10	5	0
Aniline Oil (pure) .. .. per lb.	0	0	4¾
Aniline Salt ,, ... ,,	0	0	4¼
Antimony .. .. per ton	37	5	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	4	10	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	5	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
Chiha Clay (at Runcorn) in bulk .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizatine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	8
,, 50/90 ,, ... ,,	0	0	8
Carbolic Acid (crude 60°) .. .. ,,	0	1	11
,, (crystallised 40°) .. .. .. per lb.	0	0	6¾
,, (liquid 95/97%) .. .. .. per gallon	0	1	0
Creosote (ordinary) .. .. ,,	0	0	3
,, (filtered for Lucigen light) .. .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	2	6
Solvent Naphtha, 90% at 160° .. .. per gallon	0	1	2
Copper .. .. per ton	70	7	6
,, Sulphate .. .. ,,	22	15	0
,, Oxide (copper scales) .. .. ,,	52	0	0
Glycerine (crude) 80% .. .. ,,	24	0	0
,, (distilled S.G. 1250°) .. .. ,,	48	10	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	2	6
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	14	7	6
,, Litharge Flake (ex ship) .. .. ,,	16	5	0
,, Acetate (white ,,) .. .. ,,	25	0	0
,, ,, (brown ,,) .. .. ,,	17	15	0
,, Carbonate (white lead) pure .. .. ,,	17	10	0
,, *Nitrate* .. .. ,,	20	0	0
Lime, Acetate (brown) (ex ship) .. .. per ton	5	7	6
,, ,, (grey) (ex ship) .. .. ,,	7	17	6
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton	9	10	0
,, Sulphate (Epsom Salts) .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	15	10	0
,, Borate .. .. per cwt.	2	0	0
,, Ore, 70% .. .. per ton	3	10	0
Methylated Spirit, 61° O.P .. .. per gallon	0	2	0
Naphtha (Wood), Solvent .. .. ,,	0	2	10
,, ,, Miscible, 60° O.P. .. .. .. ,,	0	3	10
Oils:—			
Cotton-seed .. .. per ton	15	10	0
Linseed .. .. ,,	18	15	0
Stearine .. .. ,,	26	0	0
Phosphorus (Yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	0	0
,, Chlorate .. .. per lb.	0	0	3½
,, Cyanide, 98 % .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) 90 % .. .. per ton	22	0	0
,, ,, ,, 75/80 % .. ,,	17	15	0
,, Potash Hydrate Liquid 50 % .. .. ,,	10	10	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	2	12	6
,, Prussiate Yellow .. .. per lb.	0	0	7¼
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	0
,, Muriate, 80 % ,, ... ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3½
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % .. nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	5	0
,, ,, (Carb. Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Alkali) 58 % (Bags) .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Soda Crystals) .. .. ,, ,, (f.o.r. w'ks.)	2	10	0
,, Acetate (ex-ship) .. .. ,,	12	10	0
,, Arseniate, 45 % .. .. ,,	13	0	0
,, Chlorate .. .. per lb.	0	0	3¼
,, Borate (Borax) .. .. nett per ton	16	0	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton (10 ton lots)	7	12	6
,, ,, (74 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,, (10 ton lots)	6	17	6
,, ,, (60 % Caustic Soda) .. ,, ,, (10 ton lots)	5	17	6
,, ,, (pure liquor 90° Tw.) .. ,, ,, (10 ton lots)	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate .. .. ,,	6	15	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25 % .. .. ,,	16	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	6
,, Nitrite, 98 % .. .. per ton	25	0	0
,, Phosphate .. .. ,,	10	7	6
,, Prussiate .. .. per lb.	0	0	5⅜
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	10	0
,, Stannate, 40 % .. .. per cwt.	3	10	0
,, Sulphate (Salt-cake) .. .. per ton	1	8	6
,, ,, (Glauber's Salts .. .. .. ,,	1	10	0
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	4	15	0
Strontium Hydrate, 100 % .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. .. per lb.	0	0	5¼
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton	7	0	0
,, (Roll Brimstone) .. .. ,,	6	0	0
,, Brimstone: Best quality .. .. ,,	4	12	6
Superphosphate of Lime (26 %) .. .. ,,	2	10	0
Tallow .. .. ,,	24	0	0
Tin Crystals .. .. per lb.	0	0	7
,, English Ingots .. .. per ton	116	0	0
Zinc (Spelter) .. .. ,,	25	5	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	7	5	0
,, Sulphate, Crystal .. .. ,,	6	15	0

THE

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AND

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Articles, reports, and correspondence on all matters of interest to the Chemical and allied industries, home and foreign, are solicited. Correspondents should condense their matter as much as possible, write on one side only of the paper, and in all cases give their names and addresses, not necessarily for publication. Sketches should be sent on separate sheets.

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Advertisements intended for insertion in the current week's issue should reach the office by **Thursday morning** at the latest.

CURRENT TOPICS.

ONCE BITTEN TWICE SHY.

IT is now almost four years since an effort was made by the S.O. Co., to coax the Scotch oil producers into a Paraffin Combine on the condition that they "dropped" the flash point question. We dealt with the general instability of the American offer at that time, and the overtures ended in nothing; and yet, as if driven to their last resource, another effort is to be made in London, on Tuesday next, to purchase the silence of the Scotch producers by a promise to force up the price of paraffin wax ½d. per lb.

We understand that the great John D. himself is coming, and no effort has been spared to heighten the colour of his pretensions to friendliness, for last week a paragraph went the round of the British press that, owing to the fall in oil, he had been losing at certain stages of the collapse about £200,000. per minute. Readers can take this with or without the usual grain of salt, just as they please, though even after two hours at this rate the losers would still be millionaires many times over. All we wish to make quite clear is, that in no manner whatsoever must this reported "tale of woe" be allowed to influence the judgment of those who have to weigh the worth of Tuesday's proposals.

There are two points on which we are quite at loss. Why have the *Scotch* producers been singled out for the favour of forming a protective alliance, and why are *they* asked to drop the flash point question? The production of oil in Scotland is a mere bagatelle compared with the American output. The real thorn in the flesh is Russia, and it is an increasing production like that revealed by the recent statistics published in the new Baku Journal, *Naphtha Business*, that they should try to bribe off and choke down. Possibly this selection has been made in order to give fresh zest to the cry of "Protectionists," with which the bile of British legislators has been so oft, so successfully, but so unwarrantably, stirred by the procurators of the S. O. Co.

With regard to the second point, we fail to see why the Scotch producers in particular should be thus enticed into a policy of passivity about the standard of safety. It is only among benighted politicians that the notion of this flash point being a Scottish movement has prevailed. We grant that one or two of the leading spirits, and particularly the chief leading spirit, chanced to be born north of the Tweed, but in endeavouring to silence the voices that proclaim for a reasonable standard of safety, the American plenipotentiaries have not merely to deal with a handful of Scotch oil producers, but with the British Public, the British Parliament, and the British Press. We have sufficient belief in the integrity of all three, and the last in particular, to pit it against the seductive wiles of those who wish to cry Peace where no Peace is, or can be. We should still think the same if the prime movers had been gaining £200,000. a minute instead of losing it. It is not within the power of the Scotch producers

to sway or stay public feeling on this matter; and to purchase their silence is as futile as damming the Mississippi in order to dry up the Atlantic Ocean.

From what we gather, the Scotch oil makers are alive to these facts; and likewise for several other reasons are not disposed to favour any advances, no matter how tempting. We hope the result of Tuesday's meeting will bear out our anticipations.

There is but one thing we regret, namely that the report of the London Chamber of Commerce upon Illicit Commissions is not already printed, so that a copy might have been presented to every one of the gentlemen, who after four years' persecution, are so anxious to stop the mouths of safe oil advocates with the extorted profits on paraffin wax. Who are these gentlemen who propose to advance the price of wax at will? The very suggestion should be enough to put up the backs of most British men of business.

BRITISH EXHIBITORS AND THE FRENCH EXHIBITION OF 1900.

Last May a decision in the Paris Court of Appeal went against a Swiss manufacturer who brought action against a French manufacturer for infringing his registered designs, and this decision has caused considerable uneasiness among intending exhibitors at the forthcoming Exhibition of 1900 at Paris.

The main ground for anxiety lay in the fact that the Swiss lost his case because the Court of Appeal held it was necessary to manufacture on French territory, as well as register. This point has been taken up by the British Chamber of Commerce in Paris, and dealt with in their January circular.

It appears that since the date of this decision the French Government has taken up the reform of the existing legislation on industrial designs, and the law is to be reasonably and suitably re-enacted prior to the Exhibition. It is also pointed out that there is no such thing as precedent in French law, so that this particular decision will have no influence upon subsequent judicial opinions.

Lastly, it is stated that a measure is before the French Parliament for ganting to foreign designs even greater protection than they receive under the British Act of 1883. With this three-fold assurance before them British manufacturers should not have cause for immediate anxiety, but nevertheless, in important registration cases it will be as well to make quite sure of the intentions of the French Parliament being fulfilled, and to learn the exact scope and wording of the law after it has been re-cast.

EXPORTS OF PETROLEUM FROM U.S.A.

THE Chief of the Bureau of Statistics, Washington, gives the following returns of the exports of petroleum and petroleum products for December. The total shipments were 65,870,049 gallons, compared with 90,971,903 gallons in 1897. The total for the 12 months ending December, 1898, was 986,480,610 gallons, against 994,297,757 gallons in the same period of 1897. The details of the shipments are as follows:—

			Gallons.
CRUDE PETROLEUM.			
Total, December,		1898	4,176,821
,,	,,	1897	10,404,768
NAPHTHAS.			
Total, December,		1898	1,556,190
,,	,,	1897	1,231,970
ILLUMINATING.			
Total, December,		1898	50,096,378
,,	,,	1897	71,786,378
LUBRICATING AND PARAFFIN.			
Total, December,		1898	6,544,370
,,	,,	1897	5,091,505
RESIDUUM.			
Total, December,		1898	3,496,290
,,	,,	1897	2,227,282

THE POSITION OF SODIUM NITRATE.

COMPARATIVE AND PROSPECTIVE.

SPEAKING at the meeting of the Rosario Nitrate Company, Ltd, on Tuesday, Mr Archibald Balfour said:—"I am sorry to say that, as far as things go at present, we can only continue to follow the same policy as we pursued last year. That policy consists in restricting our production of nitrate to the very lowest degree possible, only making just sufficient to enable us to pay our way. Indeed, it is perfectly clear, I think, to everyone that any other policy under these circumstances would be simply suicidal. We have a very valuable property, we have large and rich grounds, and we are cheap producers—I do not say the cheapest; but I maintain that we produce as cheaply as anyone on the West Coast. On the other hand, we see, from a variety of considerations, that the present selling price of nitrate is very much lower than its intrinsic value. It would, I repeat, be absolute madness to exhaust our grounds and turn them into nitrate at such an extremely unremunerative rate of profit. Take one illustration alone. If you look you will see that

THE PRICE OF SULPHATE OF AMMONIA

which, as we all know, is one of our main competitors, is £10 5s. a ton. Now, the proportionate value of nitrate—of course, being valued upon the units of nitrogen that the two articles contain—would make nitrate worth at least £1. per ton more than the price at which it stands to-day. With regard to our being cheap producers, I think it would be interesting to you if I mentioned a small fact in this connection. We have now been at work for as nearly as possible ten years, and it would be rational to suppose that at the end of that time your cost of production would have increased; but not only has it not increased, it is slightly less to-day than it was when we commenced business. I should like to say a few words on the

GENERAL POSITION OF THE TRADE

at large; first, as to consumption, then as to production, and those two subjects lead us to the burning question of the day, viz., that of combination. With regard to the first point, the world's consumption of nitrate has increased during the past five years by 300,000 tons, and as far as we can see, there is no sign of its dropping back, or even being stationary. On the contrary, there is a very healthy and steady expansion, not only in what we may call the older countries, where the use of nitrate has been long and well known, such as Germany, England, France, and Belgium, but we also see that there is a steady increase in what may be called new countries, in which category we may put the United States, Italy, Spain, and, we hope very shortly to see added to that list quite a new customer, viz., the South of Russia, where there is a large and flourishing industry in the manufacture of beet sugar. We doubt not this gratifying result is owing to the propaganda, and, in that connection, I think that the gratitude of all interested in the nitrate trade is due to the Chilian Government, because they contribute very material assistance to the unavoidable expenses of carrying on that propaganda.

COMBINATION AND THE CENTRALISATION OF SALES.

As regards the proposed Combine, I think we are justified in saying that the recently rejected scheme will be revived, perhaps with slightly modified conditions. It may be sooner or it may be later, but it is our distinct conviction it must come sooner or later, and that the irresistible weight of solid common sense must eventually win the day and break down whatever obstinacy and selfishness there may be on the part of some of those who are interested in this trade. So soon as that combination for the restriction of the output is accepted we hope a still further arrangement will be come to—it is already being actively spoken of—for centralising the sale of nitrate in the hands of one body—a trust company, a syndicate, or a consignment company, it does not much matter what it is called. Just as with regard to the combination for the restriction of output, it is our opinion that common sense will sooner or later bring about a result by which we shall carry through an arrangement of the sort I have indicated, and when and if that day dawns we shall find our business once more in a thoroughly normal and sound position."

Obituary.—It is with sincere regret we announce the death of Mr Alderman Lloyd, of the firm of Higgin, Lloyd and Co. Mr. Lloyd was born in Salford. He carried on the business of a manufacturer of chemical products from his early manhood First he had works near Wigan; then he became partner with Mr. James Higgin, an expert in calico printing and dyeing, and the firm of Higgin, Lloyd, and Company have long been well known in the chemical trade, and now have works in Manchester and near Wigan. Though a busy commercial man, Mr. Lloyd recognised that he owed duties to the general body of citizens. Determined to fulfil them, he entered the City Council in 1880, and was elected Lord Mayor of Manchester in 1894. He was 73 years of age. The funeral took place at Worsley on Tuesday of this week.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Improvements in Metallurgical Processes. A. S. Plews and J. W. Worsey. 1,491. January 23.

Non-poisonous Strike-anywhere Matches. R. H. Jude, 1,510. January 23.

Improvements in Secondary or Storage Batteries. W. M. McDougall. 1,553. January 23.

Improvements in the Manufacture of Secondary Battery Plates. W. M. McDougall. 1,554. January 23.

Improvements in and connected with Gas Producers. M. Taylor. 1,574. January 23.

Improvements in the Purification of Sewage, etc. H. Tulloch. 1,641. January 24.

Converting Metallic Lead into Lead Oxides. H. Harris Lake. 1,638. January 24.

Drying Apparatus for the Manufacture of Portland Cement. Preston Davies and E. J. Vavasour Earle. 1,756. January 25.

Improvements in the Manufacture of Plates for Secondary Batteries. L. Champagne. 1,844. January 26.

Pyrites Roasting Furnaces for the Direct Production of Sulphuric Anhydride. G. W. Johnson. 1,859. January 26.

Distilling Ammoniacal Liquor from the Ammonia Soda Process. A. Cowsill. 1,896. January 27.

Improvements in the Manufacture of Secondary Battery Plates. V. G. Lironi. 1,902. January 27.

Improvements in the Manufacture of Copal Varnish. S. Banner. 1,938. January 27.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in or Relating to the Treatment of Wood for the Manufacture of Charcoal. D. A. Casalonga, 15, Rue des Halles, Paris. Eng. Pat. 10,512. May 17, 1898 (under Internat Convention, October 8, 1897.

The green wood is packed on open trucks which are driven by ratchet gear along a gallery, which is built in a circle. By means of a fan, a current of hot air is drawn through the gallery in a direction opposite to that in which the trucks travel. The air is heated by a conveniently placed furnace. The entering air is partially heated by a recuperator near the chimney. There are three figures.

Improved Process for Preparing and Treating Lime, and Apparatus therefor. H. J. Harding, 11, Bloomfield-road, Paddington, London, W. Eng. Pat. 3,203. February 8, 1898.

In the preparation of hydraulic lime (which requires to be finely divided), the freshly calcined limestone is quenched in boiling water, and then dried in an oven, which communicates with an uptake at one end. A quick draught is induced in the uptake and also through the upper portion of the oven by hot air jets, which carry away the particles of lime, which are small enough and light enough, and deposits them in an air-tight receptacle. With certain limes suitable chemicals are added in order to assist in preserving the lime in the required state of hydration. There is one figure.

New or Improved Process for the Treatment of Calcium Carbide. J. Bilbie, 80, Queen Victoria-street, and H. Drivet, 8, Euston-square, London. Eng. Pat. 19,786. September 17, 1898.

The carbide is first treated with about 2 to 5 % of citronella mirbane, eucalyptus, &c.; then 2 to 5 % of petroleum dried over quicklime, and finally to the resultant mass is added another 1 % or 2 % of an essential oil as named above.

Improvements in or Relating to the Bacteriological Purification of Sewage. W. D. Scott-Moncrieff, 14, Victoria-street, Westminster. Eng. Pat. 4,994. March 1, 1898.

To obtain a better effluent from "strong" sewages, part of the nitrified effluent coming from the apparatus described in patent 18,555 of 1897, is mixed with the hydrolised effluent resulting from anaërobic fermentation in the cultivation tanks, so that the oxygen in the nitrates is used to assist the destruction of organic matter and improve the condition of the effluent generally.

Improved Pasture Fertiliser and Moss Killer. J Logan, Coltness, Lanarkshire. Eng. Pat. 5,540. March 7, 1898.

A mixture which combines the properties of a fertiliser and moss killer, and also acts as a preventative of potato disease, and "finger and toe" in turnips, is said to be capable of preparation in the following manner:—40 % mineral phosphate mixed with 20 % crystallised ferrous sulphate, 30 % sand, 5 % of potassium sulphate or chloride (for which 10 % of kainit may be substituted), and 5 % of sulphate of ammonia.

SOCIETY OF PUBLIC ANALYSTS.

THE annual dinner of the Society of Public Analysts was held last week at the Criterion Restaurant, Mr. W. W. Fisher, M.A., president, in the chair. Among those present were Professor W. Odling, F.R.S., Mr. G. Beilby, President of the Society of Chemical Industry, Professor W. A. Tilden, F.R.S., Mr. W. Hills, President of the Pharmaceutical Society, Dr. T. Stevenson, President of the Institute of Chemistry, Dr. Childs, Dr. Longstaffe, Mr. F. W. Beck, Dr. Pakes, and Mr. H. W. Hake. The toast of "The Queen" having been drunk, the toast of "The Institute of Chemistry" was proposed by Prof. Odling, who said he would like to see a journal published completely devoted to analytical chemistry. Dr. Stevenson, in responding to the toast, said he hoped the time was not far distant when the Institute of Chemistry would occupy the same position as those qualifying bodies that put the hall-mark on the lawyer, the medical man, and other professions. For a long time the Local Government Board had recognised the Institute's diploma as a qualification in chemistry. Dr. Bernard Dyer, in proposing the toast of "Kindred Societies," referred to the Chemical Society, which he said was the mother of the Society of Public Analysts and of some other societies with which they claimed kindred. Mr. W. Hills responded. Professor Tilden proposed the toast of "The Society of Public Analysts." The president, in response, said the society came into existence owing to an Act of Parliament regarding the regulation of food and drugs. That Act endeavoured to secure a greater amount of authority in regard to food supply, and he thought the Act had done a great deal of good on the whole. The Society of Public Analysts wished to advance the state of analytical chemistry as to adulteration and the laws relating to the adulteration of food and commercial products. With regard to legal matters, the Society, unfortunately, had had many difficulties to contend with. They desired the establishment of some kind of authority which would be effective. In some cases at present the standards of analysts were well recognised as in regard to weights and measures, but directly it was attempted to recognise standards for articles of food difficulties arose. The people were most averse, for instance, from a standard in the case of milk. What was really wanted was the establishment of some actual authority, and of some kind of standard of food which would be effective. The toast of "The Guests" was proposed by Mr. O Hehner and responded to by Mr. G. Beilby.

INSTITUTE OF CHEMISTRY.—The following are the names of the candidates who were successful at the January examinations, 1899. The examiners were Prof. Percy F. Frankland, F.R.S., F.I.C., and Otto Hehner, Esq., F.I.C. *Names of Candidates who passed the Practical Examination for Associateship:* Chapman, Arthur Jenner, Finsbury Technical College, London, and with Messrs. F. and A. C. Claudet, FF.I.C.; Forster, Ferdinand Edward Paul, Finsbury Technical College, registered student under Messrs. F. E. Lott, F.I.C., and C. G. Matthews, F.I.C.; Lishman, George Percy, B.Sc. (Edin.), Surgeons' Hall, Edinburgh, registered student under Prof. W. Ivison Macadam, F.I.C. *Intermediate Examination:* Aston Stafford, University College, London; Blackman, Walter Lionel, Royal College of Science, London, and St. Bartholomew's Hospital; Coysh, Basil Radcliffe, King's College, London; Hewitt, Henry Dixon, Finsbury Technical College; registered student under A. C. Chapman, Esq., F.I.C.; Hill, Alfred, University College, Nottingham; Kinnersley, Henry Wulff, Merchant Venturers' Technical College, Bristol, under Prof. Julius Wertheimer, B.A., B.Sc., F.I.C., registered student under Dr. E. H. Cook, F.I.C., and at King's College, London; Rogers, John, Glasgow and West of Scotland Technical College; Shedden, Frank, B.Sc. (Lond.), Mason University College, Birmingham; Wright, Leonard Victor, B.A. (Cantab.), Sidney College, Cambridge. *Final Examination for the Associateship:* Mineral Chemistry.—Golding, John, School of the Pharmaceutical Society, Laboratory of the Royal Agricultural Society of England, University College, Nottingham; Hancock, Walter Charles, B.A. (Cantab.), Caius College, Cambridge, with Messrs. C. F. Cross, F.I.C., and E. J. Bevan, F.I.C., and at King's College, London; Marshall, Arthur, A.C.G.I., City and Guilds of London Institute. Metallurgical Chemistry: Imrie, John, Glasgow and West of Scotland Technical College; Wild, Roland Cecil, King's College, London, registered student under C. J. Head, Esq., F.I.C. Organic Chemistry: Gilles, William Setten, A.C.G.I., City and Guilds of London Institute; Hinks, Percy John, A.R.C.Sc. (Lond.), Royal College of Science, London; Joyce, Thomas Goode, B.Sc. (Lond.), Mason University College, Birmingham. The Analysis of Food and Drugs, and of Water: Gilbard, John Francis Hutchins, Finsbury Technical College; and with Dr. Bernard Dyer, F.I.C.; Hackman, Charles Adolphus, King's College, London, and with A. C. Chapman, Esq., F.I.C.; Young, Francis Samuel, M.A. (Oxon.), Queen's College Oxford, and Caius College, Cambridge.

ERRORS IN THE DETERMINATION OF NITROGEN.

[BY C. G. HOPKINS.]

THE determination of nitrogen was made by the ordinary Kjeldahl method. The metallic mercury used in the digestion was measured in a capillary tube, one end of which is doubly bent so as to form a loop, the short arm of which is turned back upon itself near the end while the long arm serves as a handle. The loop is made sufficiently narrow to pass into the mercury bottle, and of sufficient length to retain, when raised above the liquid, the exact quantity of mercury required for a single determination. By blowing in the longer arm the mercury is emptied into the digestion flask.

Heavy copper flasks were used in the distillation with much satisfaction, the sodium hydroxide solution (containing the necessary amount of potassium sulphide) being added in sufficient excess to "bump" before the contents may become dry, thus serving as a signal that the distillation has gone far enough.

Two common sources of error in the nitrogen determination were found and investigated. In titrating an acid solution in an open vessel with standard ammonia solution a very appreciable error is introduced by the volatility of the ammonia, although the only possible loss is from the tip of the burette and from the falling drops.

In the following work ammonia of about one-sixth normal strength was used, the hydrochloric acid being of such strength that 3 cc. were equivalent to approximately 4 cc. of ammonia. The hydrochloric acid was measured from an automatic overflow pipette of 15 cc. capacity, and the ammonia from an automatic overflow burette graduated to 0·05 cc. and drawn to a fine tip at the outlet. The pipette and burette were each provided with three-way stop-cocks through which the standard solutions were drawn from the stock bottles by means of siphons. Perfectly neutral water free from ammonia and carbon dioxide was used for diluting. Lacmoid served as the indicator and gave an exceedingly sharp end-reaction.

By titrating in beaker flasks with the tip of the ammonia burette well below the top of the flask the following results were obtained, the length of time taken in making the titration being also given:—

	Hydrochloric Acid Taken. cc.	Ammonia Required. cc.	Time (minutes).
No. 1	15	20·10	1
„ 2	15	20·08	1
„ 3	15	20·12	1
„ 4	15	20·30	2
„ 5	15	20·25	2
„ 6	15	20·40	3

By titrating in an Erlenmeyer flask attached to the burette by means of a rubber stopper,* provided with a capillary tube for relieving the pressure, the following results were obtained:—

	Hydrochloric Acid Taken. cc.	Ammonia Required. cc.	Time (minutes).
No. 1	15	19·82	1
„ 2	15	19·83	1
„ 3	15	19·81	3
„ 4	15	19·81	5

As from three to five minutes are taken to make a titration when the amount of ammonia required is not known, as in ordinary nitrogen determinations, the error† from titrating in open vessels becomes an important factor, the total variation in the two series of experiments above noted amounting to six-tenths cc., or 3 per cent of the ammonia required. The fact that the density of ammonia gas is but little more than half that of air explains its rapid upward diffusion from an open vessel.

Another error in nitrogen determinations may occur in the distillation by loss of ammonia from the receiving flask in case there is not sufficient acid *above the end of the delivery-tube* to neutralise all of the ammonia distilled over.

In the following work a quantity of a very dilute solution of ammonium chloride was prepared by exactly neutralising standard hydrochloric acid with standard ammonia and diluting with ammonia-free water. A quantity of this solution equivalent to 12 cc. of standard ammonia was placed in a distillation flask with an excess of sodium hydroxide and distilled into 15 cc. of standard hydrochloric acid diluted to about 40 cc., the end of the delivery-tube from the condenser dipping *well into the acid solution*. The relation of the standard acid and ammonia solutions was such that 15 cc. hydrochloric acid were equivalent to 19·82 cc. ammonia. Six distillations were made, in each case ammonium chloride equivalent to 12 cc. of standard ammonia solution being taken. Following are the amounts of standard ammonia solution required to neutralise the excess of acid:

	Required. cc.	Calculated. cc.	Error. cc.
No. 1	8·20	7·82	0·38
„ 2	7·85	7·82	0·03
„ 3	7·93	7·82	0·11
„ 4	8·60	7·82	0·78
„ 5	7·84	7 82	0·02
„ 6	7·95	7·82	0·13

Two of these are practically exact, the other four showing errors varying from 0·11 cc. to 0·78 cc. of standard ammonia.

This work was repeated with the distillation from quantities of ammonium chloride equivalent to 15 cc. of standard ammonia solution, the other conditions being as before. Following are the amounts of standard ammonia solution required to neutralise the excess of acid:

	Required. cc.	Calculated. cc.	Error. cc.
No. 1	6·10	4·82	1·28
„ 2	5·40	4·82	0·58
„ 3	5·95	4 82	1·13
„ 4	6·20	4·82	1·38
„ 5	5·65	4 82	0·83
„ 6	5·18	4·82	0·36

Diluting the residues in the distillation flasks with ammonia-free water, and distilling, gave no further addition of ammonia in any case.

It was observed that in both trials the greatest errors occurred with Nos. 1 and 4. A careful inspection of apparatus showed all connections to be perfect. It was observed, however, that the delivery-tubes from Nos. 1 and 4 did not reach as far into the acid solution as most of the others.

With the thought that possibly ammonia escaped from the receiving-flasks, the following six distillations were made, in each the quantity of ammonium chloride employed being equivalent to 19·32 cc. of standard ammonia solution; thus, exactly five-tenths cc. of standard ammonia should have been required to neutralise the excess of acid. Some lacmoid indicator was added to the acid solutions in receiving-flasks Nos. 1, 3, and 5; strips of moistened red litmus paper were also hung in the necks of these flasks. During the process of distillation, receiving-flasks 2, 4, and 6 were agitated to keep their contents thoroughly mixed.

It was observed that, during the process of distillation, in receiving-flasks 1, 3, and 5 the liquid above the end of the delivery-tube turned blue, while a layer of liquid below this remained red; also that the moistened red litmus paper hung in the necks of these flasks turned blue.

In titrating the excess of acid the amounts of standard ammonia required were as follows:

	Required. cc.	Calculated. cc.	Error. cc.
No. 1	2·60	0·50	2·10
„ 2	0·50	0·50	0·00
„ 3	2·27	0·50	1·77
„ 4	0·53	0·50	0·03
„ 5	1 99	0·50	1·49
„ 6	0 50	0·50	0·00

The explanation for the separation of the liquid in the receiving-flasks into two layers as described is to be found in the different densities of aqueous solutions of ammonia and hydrochloric acid.

In subsequent work I have used delivery-tubes reaching to the very bottom of the receiving flasks, and contracted at the end to an aperture of but 4 or 5 mm. diameter. This insures considerable agitation of the contents of the receiving flask produced by irregularities in the boiling of the liquid in the distillation flask.

This loss of ammonia shown to have taken place from the very dilute solution in the receiving flask after cooling by an efficient condenser emphasises the results of the preceding work on titration and the importance of avoiding a common error in that process.

* By using a stopper which has been bored nearly through from the small end by a large borer, the flask may easily be given a free rotary motion.

† Confirmed by recent (unpublished) work of Dr. F. L. Kortright, of Cornel University.

PENDING REPORT OF THE PURE BEER COMMITTEE.—The report of the Beer Materials Committee has been anxiously expected for some time, having been drafted as long ago as July. It is understood its conclusions are of general interest, inasmuch as there is a probability that, while the apparent sympathy of the majority of the Committee with the brewers will lead them to favour a continuance of the "free mash tun," with practically no restriction whatever, a minority report will urge that the existing system affords insufficient safeguards against the use of deleterious materials, and enables brewers to sell as beer a liquor not manufactured, as it is popularly expected to be, entirely from barley, malt, and hops.

NOTES ON FOREIGN TRADE.

ITALY.

Tartar.—During the past season (which extends from October, 1897, to September, 1898) 9,953 tons of tartaric materials, valued at £368,640., were shipped from the Calabrian Coast, against 9,342 tons, valued at £366,500., of the previous season.

Description.	1897-98.		1896-97.	
	Quantity.	Value.	Quantity.	Value.
	Tons.	£	Tons.	£
Half-refined tartar.....	1,144	64,065	1,069	61,480
Vinnacio argols	3,397½	176,690	2,642	142,730
Crude argols	1,979½	84,130	2,827	124,420
Wine lees	3,432	43,755	2,804	37,870
Total	9,953	368,640	9,342	366,500

Half-refined tartar was chiefly exported to great Britain and Germany, vinnacia argols to Great Britain and United States, crude argols to the United States, wine lees to Great Britain.

EGYPT.

Candles are the most important of the articles included under this heading. British candles, so far from obtaining an increased sale, appear to be losing ground, being surpassed by those imported from France, Belgium, Holland, and Germany. The import was distributed as follows in 1897 :—

Country.	Quantity.	Value.
	Kilos.*	£
France	539,787	17,153
Belgium	397,730	11,890
Holland	106,875	3,463
Germany	26,079	945
United Kingdom.....	25,161	857

* 1 kilo equals 2·2 lbs.

It should be possible to push the sale of British candles, as there is at present only one well-known maker in the market.

JEDDAH AND HODEIDAH.

Matches.—It is satisfactory to note that although formerly matches were generally imported from Egypt, Italy, and Trieste by Greek and Arab merchants, of late some kinds of safety matches of British manufacture are steadily, though slowly, gaining ground in the market here.

Candles and *soap* used to be brought here by British Indian merchants from places in the East ; but in the year under review Arab and Greek merchants introduced them here from Egypt, Turkey, and Europe.

Last year there was a large export of *gum arabic* to Europe and the East.

Salt.—During 1897 the Ottoman Government extended their salt works, and through the exertion of their inspector at Solif shipped a great quantity of salt to India.

There have been more improvements in the salt works at the above-mentioned place.

BATOUM.

Ramie Fibre.—The cultivation of the Ramie plant (Chinese nettle) has been so very successful, more especially in the district of Batoum, that the area under this plant is from year to year increasing. The past year's crop has been very abundant, and it is stated that some Russian capitalists are on the point of building a factory in a suitable locality for the purpose of working up the fibre. The Imperial Domains at Chakva have already received machinery for handling this article.

GERMANY.

In comparing the trade of Germany with Great Britain from 1889 to 1896 it appears that the only imports that had risen much from Great Britain were £289,850. for *tar*, *pitch*, *resin*, and asphalt, £164,950, for linen and wares thereof, and £126,300. for machines and vehicles.

The increases in German exports to Great Britain, in the period under review, consisted chiefly of £1,118,950. in hardware and ironmongery, of £601,100. in drugs, apothecary's wares, and paints, of £568,650. in iron and wares thereof, of £344,450. in paper and cardboard, and of £332,500. in fats and oils.

SEMET-SOLVAY COKE OVENS IN ALABAMA.

AN extensive coke oven installation has recently been put in operation by the Tennessee Coal, Iron, & Railway Co., at Ensley, Alabama, U.S.A., concerning which Mr. W. H. Blauvelt gives the following particulars in a paper communicated to the American Institute of Mining Engineers :—

The plant of Semet-Solvay ovens at Ensley consists of 120 ovens, arranged in two parallel blocks of sixty each. The coal used is the washed slack from the Pratt seam, and it is expected that the plant when in full run will produce from 420 to 460 tons of coke per day. The coke will be consumed by the Ensley furnaces.

In the design of the plant careful attention has been given to the problem of handling materials with a maximum of labour, and at the same time elaborate handling machinery has been avoided as being unsuited to the class of labour most available.

A spur from the track leading from the Pratt coal mines and washers is carried directly over the coal bins above the ovens, the track having a grade at the steepest part of 1 05 feet per hundred, so that a locomotive can deliver a day's supply of coal at one shift.

The coal is delivered in thirty ton cars with sloping hopper bottoms, and one labourer can easily dump, in ten hours, the whole day's supply. The bins have a capacity of 1,500 tons of coal, to provide against any irregularity in the supply.

The coal for charging the ovens is drawn into larries below the bins and then charged into the ovens.

When coked, the charge is pushed from the oven by a steam ram, and quenched as it falls on to a car provided for the purpose. This car is thirty feet long and seven feet wide, with a sloping bottom, and is so arranged that, when pushed out on it, the coke lies in a thick even layer that permits complete quenching with a minimum resultant moisture in the coke.

The blocks of ovens are located at right angles to the line of the Ensley furnaces and about 350 feet distant from the stock house. This arrangement permits the most convenient delivery of the coke to the stock house. By a wire rope and winding engine the quenching cars are drawn up a grade of 1 in 6 into the stock house to an elevation sufficient to permit the coke to be dumped into a large bin with a sloping bottom, which in turn discharges directly into the furnace buggies that are sent to the tunnel head. Thus the coke is moved but three times after it is quenched until it lies in the furnace, and the breakage is reduced to a minimum. A coke fork becomes a useless utensil, with a corresponding reduction of labour.

Turning now to the by-products from the coking plant, the by-product building is located midway between the two blocks of ovens and is of slow burning mill construction. Two sets of gas condensers, one for each thirty ovens, are at each end of the building, and beyond them at one end is the sulphate of ammonia house. Within the building are the necessary exhausters, washers, pumps, tanks, etc., for collecting the by-products.

Immediately adjoining the property on the west is a tar distilling plant, and the tar collected from the gas, after being measured, is pumped directly from the by-product building to the receiving tanks. This plant produces from the tar, roofing pitch, tar paper and creosoting oils, for all of which products there is a market in the Southern States.

The ammonia produced is at present manufactured into sulphate of ammonia. As the ammonia is condensed out of the gas it is collected in the form of a weak liquor containing probably not more than 1½ per cent. of NH_3, along with a good many impurities. This is treated in the usual way for the manufacture of ammonium sulphate.

Sulphate of ammonia finds a ready market, as there are large fertilizer factories in a number of the Southern States, and sulphate is one of the most valuable sources of nitrogen obtainable. It is worth more per unit of nitrogen than nitrate, blood, or any of the other usual sources of this important element.

Anhydrous ammonia, that is, ammonia gas condensed by compression into the liquid form, is used in large quantities throughout the South in the manufacture of artificial ice. This form of ammonia is not produced in the Ensley plant as yet, but it may be arranged for later.

The surplus gas from the plant, of which there will be some 2,000,000 cubic feet or more per day, is to be used in a new basic open hearth steel plant that is being erected within a short distance of the oven plant. This gas will doubtless prove to be of more value as an auxiliary than as a direct substitute for producer gas in the open hearth furnaces. It will be a great convenience for drying ladles, heating soaking pits, or in other places where comparatively small quantities of gas are required, and of a better quality than ordinary producer gas. It has been suggested that the open hearth furnaces be piped for the coke oven gas, in order to provide an easy means for rapidly controlling the heats, if the occasion should arise.

While the oven plant is not yet in full run, still enough work has been done to make a reliable comparison between the production of the

coke from this plant and from the bee hive ovens of the Birmingham district. It is the practice of some of these plants to coke two forty-eight hour charges and one seventy-two hour charge per oven per week. At other places it is more common to run one seventy-two and one ninety-six hour charge per week. A comparison of the output of the by-product ovens and the bee hive shows that the 120 ovens in the by-product plant will equal in production about 300 bee hives, making forty-eight and seventy-two hour coke, and about 340 bee hives running on seventy-two and ninety-six hour charges. The charges of coal are heavier when the bee hives make only two charges per week.

This difference in the output per oven of the bee hive and retort oven plants is due to the more rapid coking in the retort oven, although the individual charges are smaller, and also to the increased yield in coke per ton of coal due to the improved method of coking. Careful tests have shown that this increased yield adds from one-sixth to one-fifth to the amount of coke produced from a ton of Pratt coal.

A comparison of the labour on a bee hive plant of 300 ovens compared with that on the plant of 120 by-product ovens as operated at Ensley shows that the by-product plant requires but about 15 per cent. more hours labour per day than the bee hive plant.

In the former are included all men required about the plant, delivering the coke into the furnace stock house, loading the sulphate of ammonia into cars and delivering the tar to the purchaser, while in the latter are included only the men required to charge, level, wafer and draw the ovens and to load the coke on to cars. The delivery of the coke is a question of location. If the ovens were not at the furnace plant the coke would be delivered into railroad cars.

CARBORUNDUM IN 1898.

By E. G. Acheson. *

THE manufacture of carborundum in the United States during 1898 remained as heretofore in the hands of the Carborundum Company, of Niagara Falls, N.Y. The output for the year amounted to 795 tons, against 621 tons the preceding year. This increase was due entirely to more careful compounding of the crude materials, and increased efficiency in the operation of the furnaces.

During the year a still further reduction was made in the price of the grain product, the latest quotations being 10 to 12c.; the price on powders remained at 8c., as during 1897. About three-fourths of the production was in grains, the remainder in powders.

During the year, Mr. Acheson states in the *Engineering and Mining Journal*, the use of carborundum in grains and powders as a substitute for emery and corundum made decided advances. It has made a successful showing in all lines of work, with the single exception of belts, where the practice has been to mount emery with glue. The difficulty encountered in using carborundum in this field is the extreme sharpness and hardness of the particles, which causes them to be torn from the glue or cement mounting, as the result of the deep cuts they make in the metal being ground. Early in the year it was introduced into the granite mills at Aberdeen, Scotland. The polishers quickly appreciated its value as a substitute for emery, and at the close of the year they were ordering at the rate of about 2½ tons per month.

The sales of vitrified wheels during the year were over 50 per cent. greater than during 1897. Early in the year a very valuable improvement was made in the method of binding wheels and other forms of goods. Prior to January, 1898, the wheels had not proven a success when used for grinding tools, saws, and steel work generally, but the changes that were then made in the binder worked such a decided improvement that those now made for these particular purposes are, perhaps, the most successful of any produced. The change consisted in materially reducing the amount of bond (porcelain) and introducing iron, which at the temperature of vitrification fuses and combines with the porcelain, and at the same time chemically attacks the surface of the carborundum particles, causing a distinct and firm union of the mass, with the smallest amount of binder, thus producing a wheel of great strength and splendid cutting qualities. An effort was made by the Carborundum Company to have the sand-paper and emery cloth manufacturers take up the manufacture of carborundum paper and cloth, and, while some of them were disposed to handle the product to a limited extent, the negotiations were not successful, and as a result a very extensive and complete factory for the spreading of carborundum on paper and cloth was added to the plant of the Carborundum Company. This department was put into operation about October 1st, and the Company is extremely well satisfied with the venture. Thus far the work has been principally directed toward the introduction of the paper into the shoe trade as a substitute for garnet and ruby paper. At the close of the year many prominent shoe factories had adopted the paper, to the exclusion of the garnet, their results showing it accomplished about 2½ times the amount of work they could get out of the garnet paper, while the price was only about 60 per cent. higher. A few experiments made with the paper in the wood-working trade have encouraged the Company to believe that in the near future they will be able to secure a large portion of the trade in that line.

The use of carborundum in steel making was a subject of investigation by a number of steel manufacturers, and several of the leading steel casting companies have adopted it as a substitute for the ferro-silicon formerly used. There was sold for this purpose 110 tons during the year.

Experiments on the use of a non-crystalline variety of carborundum—known as amorphous carborundum—as a refractory lining for furnaces, and for the manufacture of refractory bricks, crucibles, etc, were very successful, and indicate that carborundum may prove a very valuable material for the uses of the furnaceman and metallurgist. This amorphous material is produced in the carborundum furnace simultaneously with the crystalline, but in those portions more remote from the zone of high temperature. It is the first step in the conversion of the crude material into crystalline carborundum, and when sufficiently heated changes into the latter form. Unlike the crystalline, it is not soluble in or chemically acted upon by molten iron, and having been formed at an extremely high temperature (probably more than 4,000° Fahr.), is admirably suited for the purpose in view.

During the year a small factory was built in Niagara Falls, Ont., in which 200 electrical h p. is used in the manufacture of carborundum, the current being supplied by the Canadian Electric Power Company. The plant was built by the Carborundum Company, of the United States, owning the carborundum patents in Canada. The Company proposed to limit the work to the production of the crude carborundum and the crushing and sizing into the various grains, as required by the trade. The manufacture of wheels and other forms required by the trade has been arranged for with the Hart Emery Wheel Company, of Hamilton, Ontario.

MERSEY AND IRWELL JOINT COMMITTEE.

A MEETING of the Mersey and Irwell Joint Committee was held on Wednesday this week at the offices in Mosley-street, the chair being occupied by Alderman C. Brierley, of Bury.

In the report of the Finance Sub-committee, a review of the action against the Salford Corporation, who were proceeded against for pollution of the Ship Canal, was given, and it was stated that the Joint Committee had been successful in their appeal against the original decision, and that the costs of the proceedings amounted to £1,821. The Corporation had paid taxed costs amounting to £516. and a fine of £100., which reduced the expenditure of the committee to £1,168.

Dr. Hewitt said he thought it was the practice of those found in default to pay the costs of both sides. He wanted to know the reason for the large expenditure.

Mr. F. C. Hulton (clerk to the Joint Committee) pointed out that the taxed costs in London only allowed for small charges for skilled witnesses, and their charges included a considerable amount for such witnesses.

THE COST OF SIR H. ROSCOE'S SERVICES.

It was pointed out that Sir Henry Roscoe was paid more than £750. a year for his services to the Joint Committee, and that his costs in connection with the case, which lasted eight days, were £365. It was afterwards pointed out that Sir Henry Roscoe was paid £725. a year including travelling expenses, and that he attended fifteen days as a witness in the case referred to.

Councillor Jones (Salford) asked for details of the account, and Ald. Jenkins (Salford) said he understood that the annual payment covered attendance as a witness. He thought perhaps it would be better to pay Sir Henry Roscoe as they required him.

The Chairman said he was under the same impression as Ald. Jenkins regarding the engagement or Sir Henry Roscoe.

Dr. Hewitt pointed out that the payments to Sir Henry Roscoe included the cost of assistants. Thousands of samples were submitted to him, and his assistance to the Committee was invaluable.

Mr. Bingham said the case had decided an important point, and had shown that the Joint Committee had jurisdiction over the effluent turned into the Ship Canal.

The Chairman ruled that Coun. Jones' demand for details, seeing that the Finance Sub-committee had passed the accounts, was not in order, and the subject was not further discussed.

It was decided to appoint Sir Henry Roscoe as chemical adviser at the usual rate for another twelve months, an amendment by Ald. Jenkins, seconded by Councillor Jones, being defeated by 15 votes to two.

Liverpool Nitrate Co., Ltd.—The directors have resolved to pay £1. per share out of the reserve fund, which was formed mainly for the purchase of new grounds; but, inasmuch as there are none available adjacent to the company's property, it has been deemed expedient to make the above distribution.

SOCIETY OF ENGINEERS.

THE first ordinary meeting of the Society of Engineers for the present year was held recently at the Royal United Service Institution, Whitehall. Mr. W. W. Beaumont, the president for 1898, occupied the chair, and presented the premiums awarded for papers read during that year, viz., the President's gold medal to Mr. W. Fox, the Bessemer premium to Mr. S. O. Cowper-Coles, the Rawlinson premium to Dr. J. C. Thresh, and a Society's premium to Mr. G. Thudichum. Mr. Beaumont introduced the president for the present year, Mr. John Corry Fell, to the meeting, and retired from the chair, receiving a unanimous vote of thanks for his services during the past year. Mr. Fell then delivered his inaugural address. The financial position of the society, he said, was very satisfactory, and it had increased its numbers during 1898. During the past year they had lost six of their honorary members—Sir William Anderson, Sir Henry Bessemer, Sir James N. Douglas, Sir John Fowler, Lord Playfair, and Sir Robert Rawlinson. The vacancies thus created had been filled by Sir J. Wolfe Barry, Sir A. J. Durston, Sir David L. Salomons, Prof. A. B. W. Kennedy, Mr. W. H. Preece, and Mr. A. Siemens. It was a curious fact that civil engineers availed themselves less than any other members of the profession of the privileges accorded to inventors by patent, designs, or copyright protection. It had been said that the British nation was less inventive than the American, and prior to 1883 that view appeared to be supported by the number of patent applicants in the United States as compared with those in Great Britain, but upon a reduction of the fees in 1883 the applications had reached over 30,000 per annum, and Great Britain now took a foremost place in the inventive world. With regard to successful invention, the conditions should be the result of analysis or synthesis, not mere chance dashes into an unknown field. Mr. Fell pointed out the necessity of having a special Court for the trial of patent actions. He had for long past been of opinion that such a Court should be established, and of late the Lord Chancellor and other judges had expressed the same views. They had publicly attributed the block in the Law Courts to the increasing number of patent cases, and the inordinate time many of them occupied. The president then gave a short summary of the advances made of late years in various departments of engineering.

PYRITES AND SULPHUR IN THE STATES.

Pyrites.—The most important developments during 1898 were in the South. On the Virginia mineral belt the year was an unusually active one. The Sulphur Mines Co. and the Arminius Chemical Co. exceeded all records heretofore made for shipment of pyrites, and a new mine was added to the list of producers, which property lies between the lands of the two companies mentioned. The shipments made by these three mines during the year 1898 were fully 130,000 tons, and from present indications this should be exceeded for the coming year by at least 40,000 tons.

There are no new developments on the mineral belt, although there are rumours that several properties will be prospected early in the coming year, and many options have been taken of late on lands to the north-east of this section.

A notable change from the established methods of mining pyrites in this district will shortly be inaugurated at the Arminius mines, where a cableway nearly 500 ft. in length is just about completed and ready for the excavation and removal of over 1,000,000 tons of overburden, iron ore and pyrites from the main deposit of the company. The hoisting and removal of this enormous tonnage is to be done by electrically driven motors of new design, the successful installation of which promises to revolutionise the handling of heavy materials of this character under the peculiar existing conditions.

There is every evidence that combinations of capital and the centreing of many outlying factories for the manufacture of sulphuric acid and fertilisers in strong hands (which has been noticed for the past twelve months) will result in a largely increased business during 1899, and thus establish the well-earned position of these American mines of sulphur ores. There seems to be every prospect that during the present year new sources of supplies in Newfoundland, Canada, and the United States, will enable producers to hold the markets they have already gained, as against Spanish pyrites, and to accept all new trade as offered.

On the present sale basis per unit of sulphur, American pyrites are sold at an average of about 7½c. per unit at the mines, and the freight rates to points of consumption average 3½c. to 4c. per unit. At these prices foreign ores, which are sold on the Atlantic Coast at from 11c. to 13c. per unit of sulphur, cannot expect to materially increase their consumption. With increased demand, there is every probability of stable prices, as quoted above, with some prospects of an increase in prices at inland points. Summing up the trade situation, 1898 has been a very satisfactory year, while 1899 promises to be the best one ever known since this industry was established.

The addition to the increasing consumption of sulphur in the manufacture of fertilisers, the refining of oil and our general chemical trade, the manufacture of sulphide pulp is coming forward so rapidly with so large a consumption of sulphur as to be considered an important factor in all future calculations. Besides this new demand for sulphur, the dynamite interests are very active at present, calling for a very large amount of strong acid.

Sulphur was mined in the United States in 1898 in Utah, Nevada, and Louisiana. The total production was about 3,000 short tons, valued at $66,000. The Nevada product was shipped to San Francisco. Utah produced 337 tons. The production of sulphur in Louisiana (made by the Frasch process, as in previous years), amounted to 1,427 short tons. Nothing was done at the Louisiana mines after May.

Some exploration and development work was done in the sulphur deposits of Texas, especially on those near Guadalupe. The recent prospecting at this place has shown that a very considerable area is underlaid by the mineral, but lack of experience as to the probable yield prevents any trustworthy expression of opinion as to the amount that may be derived from these deposits. It is expected that they will become productive in 1899. A new deposit of sulphur was located on the western rim of the Salton Desert, at the fork of the old Yuma and San Diego stage roads, in San Diego County, Cal. Some mineral was dug and piled up, but the owner stated that no shipments would be made until January, 1899. A deposit of sulphur was also developed near Whittier, Cal., and the discovery of a deposit in the Mojave Desert, about 50 miles from flowing wells, on the Southern Pacific Railway, was reported.—*Eng. and Min. Journal.*

Trade Notes.

ADVANCE OF PRICES IN THE SALT TRADE.—At a meeting of salt manufacturers, held this week at Crewe, it was decided to further advance the prices for all kinds of salt for inland markets, the prices realised in this branch of the trade having become so reduced by keen competition as to be almost unremunerative to the manufacturer. The first advance was made a week ago. The effect, it is contended, will be to reduce the profits of the middleman, and will not affect the cost to the consumer. An effort is being made to form an association of the whole of the manufacturers with a view to preventing the continual reduction in prices, owing to over-production and consequent fierce competition. The scheme is that all manufacturers in Cheshire, Lancashire, Staffordshire, and Worcestershire should enter into an agreement for a number of years to sell all their salt to an amalgamation of themselves, to be styled the Salt Office, Limited, to be worked in conjunction with a similar organisation at Middlesbrough, and the profits to be divided pro rata. Several meetings have been held to discuss the scheme, and the solicitors even went so far as to draw up the articles of association ready for signing, but owing to the unwillingness of two individual manufacturers to amalgamate the scheme has so far practically failed. It is evident that the augmented cost of fuel and the difficulty of obtaining it will compel manufacturers to secure enhanced prices, or suffer serious loss. An idea of the unsatisfactory state of the trade at the present time may be gathered from the fact that about one-half of the Salt Union pans are idle, and men work not more than three days per week in Winsford.

NITRATE STATISTICS.—The Permanent Nitrate Committee, in its statistical circular for February, gives the following particulars of nitrate of soda:—Total exports to Europe, January, 2,644,000 quintals; loading for Europe, February 1st, 1,329,000 quintals; imports, Europe, January, 129,870 tons; deliveries, Europe, January, 83,850 tons; visible supply, Europe, February 1st, stocks and afloat, 737,880 tons.

CORAL-BORING IN THE PACIFIC.—A progress report has been received from Mr. A. E Finckh, the leader of the scientific expedition sent to the the island of Funafuti, in the Pacific, to continue the work of coral-boring commenced there by Professor Soas, of London, and Professor David, of Sydney, with the object of ascertaining the mode of origin and growth of coral atolls. The report states that the bore sunk by the David expedition to 698ft. had been carried down to 1,114ft., when operarions had to be discontinued owing to the supply of diamonds having become exhausted. The formation was the same as that previously penetrated, and the core will be sent to the British Museum. It is thought that the results will establish the correctness of Darwin's theory, that the atolls had suhk to their present great depth through a slow subsidence.

Patent Victoria Stone, Ltd.—The directors recommend the payment of a dividend of 5 per cent., free of income tax, for the half-year ended December 31st, 1898, which, with the interim dividend paid in July last, will make 10 per cent. for the year ended December 31st, 1898, leaving a balance of £7,191. to be carried forward.

Henry Bessemer and Co, Ltd.—The annual meeting of Henry Bessemer and Co., Ltd ,was held at Sheffield on Tuesday. The Chairman (Mr. Harry Allen), in moving the adoption of the report, said the first annual meeting was held in 1890, when the shareholders numbered 66; to-day they numbered 336, spread all over the country. The dividends paid during the ten years, including the present year, amounted to £183,747. The Company had written off in the shape of improvements, additions and alterations, £32,204., and they were carrying forward from that meeting £23,779. The bad debts only came to £402. He thought this was a record of which they had cause to be proud. The Company were full of work, and an improvement in prices had recently taken place. They regretted the death during the year of Sir Henry Bessemer, who was the originator and senior partner in the firm at one time. The report was adopted, and a dividend at the rate of 10 per cent. declared. In moving the payment of the dividend Mr. Charles Allen intimated that the Company were about to open a new branch of business, and possibly a little additional capital might be required. Mr. Harry Allen was re-elected a director.

Chlorate of Potash and the Hirkai Sherif.—In view of the properties which chlorate of potash possesses as an ingredient in the composition of explosives, the wholesale importation of that salt into Turkey was prohibited some years ago. Retail chemists and apothecaries are, however, suffered to import it in small quantities for pharmaceutical purposes. Restriction as to quantity is rigidly enforced, so that no single dispenser of medicines possesses enough for any nefarious purpose; but it may be that if the minute stores of the 230 *pharmaciens* of the capital were united the total would suffice for an attempt on the life of the Sovereign. This idea entered into the mind of the watchful personage to whom the Sultan entrusted his safety on the day when, to accomplish the formalities of the Hirkai Sherif, his Majesty has to take a short drive in a suburb of his capital and to cross the Golden Horn in a steam launch. Accordingly the police were instructed to visit all the dispensaries and to seal up all the bottles, vessels, or cases containing chlorate of potash. It was necessary to do this work in one day, in order that refractory dispensers might not hide their chlorate away, and it was accomplished. Thus one of those dangers which are supposed to threaten the Sultan's pilgrimage to Top Kapou was removed.

Manchester Sewage Problem: Further Experiments.—At the meeting of the Manchester Rivers Committee, on Monday, Mr. Coun. Dreyfus presiding, a letter was read from Mr. P. F. Frankland, of Birmingham, one of the sewage experts appointed by the Corporation. After stating that a conference had been held with Dr. Perkin, of Owens College, another of the experts, and Mr. Fowler, the chemist of Davyhulme works, Mr. Frankland continues "As the time available before the inquiry is so very limited, it is necessary that we should test as many essential matters as we can with the least possible delay, and we are, therefore, of opinion that it is most important to have the existing double-contact beds duplicated, instead of merely constructing an additional upper bed. By having the beds in duplicate we shall be able to greatly increase the variety of our experiments, and obtain information on a number of points the investigation of which would otherwise have to be postponed. Should this fall in with your views we should be glad if you would kindly give instructions that the new connections now being made should be replaced by those which we have asked Mr. Fowler to explain to you, and which will enable the four beds to be used in a number of different ways. We are particularly anxious to have the four beds so as to be able to experiment satisfactorily on the most advantageous treatment of storm-water, upon which the inspectors laid so much stress." The Rivers Committee agreed to adopt the suggestions contained in the letter.

Market Reports.

TAR AND AMMONIA PRODUCTS.

There is a little more life in benzols, as the price has been reduced another fraction, bringing 90's to 7½d. and 50/90's 7¾d. to 8d. As the outcome of this, some 10,000 gallons have been sold. Pitch is very active at 24s 6d. f.o.b. East Coast and 22s. 3d. West Coast. Creosote is firm. There is no change in naphthas. Carbolic acids are a little firmer as regards crude, which is now quoted at 1s. 11½d.

Sulphate of ammonia continues to decline at all ports. Makers as a whole do not seem in a hurry to sell, but small quantities have changed hands. The following are prompt values:—Beckton, £10. 3s. 9d.; London (outside makes), £10. 5s.; Hull, £10. 3s. 9d.; and Leith, £10. 3s. 9d.

MISCELLANEOUS CHEMICAL MARKET.

A continued good demand is reported for all the main products of the alkali trade. For bleaching powder there is brisk export inquiry and prices are ruling firm for hardwood casks from £4. 17s. 6d. to £5. 5s., f.o.b., according to market. For home trade there is a good all round demand, and makers are extremely busy under contract orders; spot price is £4. 5s., softwoods, free on rails. Caustic soda is in fair request, and makers are fairly well booked for the output over this year. Current quotations are unaltered at:—77%, £7. 12s. 6d; 74%, £7. 7s. 6d.; 70% £6. 17s. 6d.; 60% £5. 17s. 6d. nett, f.o.b. Liverpool. Ammonia alkali, 58%, is steady at £3 17s. 6d. bags, f.o.r. Soda crystals, £2. 10s. per ton, bags. Bicarbonate of soda, £6. 15s., kegs, f.o.b. Chlorate of potash, 3½d. Soda, 3¾d. per lb. Bichromate of soda, 2¾d., and potash, 3½d. per lb. Sulphate of copper has further advanced to £23. 10s. per ton, and is firm thereat. Sulphur steady at £4 12s. 6d, f.o.r. Saltcake has further improved to 30s. and with good demand. White powdered arsenic is firm at £16. 10s. to £16. 15s for best brands, f.o.r. Garston. Brown acetate of lime, American, £5 5s. to £5. 7s. 6d. ex ship; English makes rather lower. Grey steady at £7. 15s. to £8. per ton. Acetic acids are without change in value and there is a fair inquiry. Aniline oil and salt are unaltered at 4¾d. and 4¼d. per lb. respectively. Carbolic acids are quite steady at prices ruling for some time past. Lead salts are dearer. For glycerine there is more demand and prices are higher. In potash, caustic and carbonate, there is a fair amount of business doing and there are no changes to record in prices. Sulphocyanides dull. Prussiate of potash and soda are firm at 7½d. and 5½d. per lb. respectively. Nitrate of soda, 7s. 6d. to 7s. 9d. per cwt., according to quality. Silicate of soda has rather a higher tendency. Tin and zinc salts are dearer. For grey muriate of ammonia, the quotation is firmer at £19., but business is reported below this price. Other ammonia salts are firm.

REPORT ON MANURE MATERIAL.

There has been a quieter market, and the recent severe weather has no doubt retarded agricultural operations. Quotations for mineral phosphates are unchanged, but shippers of Tennessee, 78/80%, seem to be wishful to be making sales, and something under 7d. per unit (the quotation) would doubtless be accepted. Sellers of high-grade Florida and of the different grades of Algerian phosphates are very firm.

There is nothing reported in River Plate bones, but for spring shipment £4. 13s. 9d. per ton, net cash, c.i.f. good U.K. ports, landing weight, is invited. East Indian bone meal, being scarce on spot, is held for £5. 8s. 9d. per ton; but for parcels afloat £5. 5s. per ton would be accepted. Nitrate of soda is a shade firmer, 7s. 7½d. per cwt. being required for good and 7s. 9d. for refined quality.

THE METAL MARKETS.

LONDON, Wednesday.—Pig iron quiet: Scotch warrants closed at 54s. 7½d.; Middlesbrough, 47s. 7½d. cash; and hematite, 59s. 6d. Copper easy: Chili bars, G. O. B.'s and G. M. B.'s, closed at £72. to £72. 5s. cash, and £72. to £72. 5s. 6d. three months. Tin flat: Straits closed at £108. to £108. 10s. cash and £107. 10s. three months; Australian, £108. 5s.; English ingots, £113. Lead steady: Spanish, £14. 15s. to £15. English, £15. 0s. 0d.; Silesian spelter, ordinary, £27. 5s. 0d. Nickel, 1s. 2½d. Antimony, £37. to £38. Quicksilver: First hands, £8. 5s.; second hands, £8. 4s. 0d. *Copper shares* steady: Cape, 4 5/16 to 4 7/16; Copiapo, 3⅜ to 3⅛; Libiola, 2 9/16 to 2 11/16; Mason and Barry, 3⅜ to 4⅛; Rio Tinto, 39 5/16 to 39 11/16; Tharsis, 8⅜ to 9⅛.

GLASGOW, Wednesday.—Market steady and a moderate business. Scotch done at 54s. 7d., 54s. 8d., and 54s. 7½d. cash; also at 54s. 9½d. to 54s. 10½d. month; buyers, 54s. 7½d. cash; sellers 54s. 8d. Cleveland done at 47s. 8d. cash, and 47s. 11d. month; buyers, 47s. 7½d. cash; sellers, 1d. higher. Cumberland hematite done at 59s. 7d. cash, and 59s. 9d., to 59s. 9½d. month; buyers, 59s. 6d. cash; sellers, ½d. more. Middlesbrough hematite, buyers, 59s. 6d. cash.

LIVERPOOL OIL AND COLOUR MARKET.

Wednesday.

OILS.—Palm oil is quiet, but steady, and sellers are not pressing. Olive maintains its position generally; sellers ask £31. per tun for Spanish. Linseed firm at 18s. 9d. to 19s. cwt. for Liverpool makes in export casks. Cottonseed is well held for 15s. 9d. to 16s. cwt. for Liverpool refined. Castor oil is dull, and good seconds Calcutta have

been sold at 2 15/16d. ex quay; for first pressure French, 3d. per lb. is still asked. Tallow is a very firm market at full prices, and a hardening tendency. Resin is somewhat slow of sale, and prices are inclined to be easier. Spirits of turpentine rule steady and unchanged at 32s. cwt. Petroleum quiet; American, 6⅜d. to 8d., and Russian refined, 5¾d. per gallon.

CAKES.—Values of American Western linseed on the spot are again the turn in buyers' favour at £6 15s. to £7. 2s. 6d., but only a moderate business was concluded thereat, whilst other imported descriptions remained quite steady in value at £7. 7s 6d. to £7. 10s. for River Plate, £7. 5s. to £7. 10s. for Bombay, and £7. 10s. to £7. 12s. 6d. per ton for Russian, with a quiet business passing thereat. Trading in Liverpool makes has been on only a moderate scale, but prices are maintained at £8. 5s. to £8. 10s per ton, according to quality. Good to choice brands of American decorticated cottonseed are quietly steady, with a moderate inquiry going on at former currencies, viz, £6. to £6. 5s., according to quality. There is a very fair business doing in Liverpool makes, the quotation being now given at £6. 5s. to £6. 15s. per ton, according to brand. Undecorticated Liverpool makes have also eased slightly, sellers now quoting £4. 16s. 3d. to £5. 5s, according to brand, but there is an extensive business passing thereat; Egyptian are in steady demand on the quay at £4. 12s. 6d. to £4. 15s. per ton, according to quality.

COLOURS.—Prices are steady, and practically without change. Ochres: Oxfordshire—common £10., medium £12, best £15.; Derbyshire—common 40s., medium 50s., best 60s.; Welsh—best 9 s.; seconds, 50s., and common, 18s.; Devonshire, 40s. to 45s.; French, J.C., 65s. Umber: 40s. to 45s. White lead: £16. Red lead unchanged. Venetian red: £6. to £10. Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7.; medium, £10.; finest, £20. Zinc oxide: £22. 10s. to £25.;

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

It is still the same story with sulphate of ammonia, which holds perversely to a decided slowness of sale, and under that influence is gradually losing ground. The loss, however, being most unwillingly acquiesced in on the part of the makers, is very slow of speed, and the drop of a whole week is not much. The value to-day is about £10. 5s. for prompt, f.o.b. Leith, but some of the makers would appear to be holding out for rather more. Nothing worth noting is going on as regards forward business. Sulphate of copper still rises, in sympathy with the continued advance in the metal, and lead chemicals are also mounting. Ordinary chemicals are in slightly better movement with contracting for the new season, but at prices which show no improvement. Mineral oils and paraffin all fairly strong. Paraffin spirit (naphtha) is bringing 9d. to 10d. per gallon—a high price.

Chief prices current are:—Soda crystals, £2. 7s. 6d. to £2. 12s. 6d. nett, Tyne; soda ash, £4. 2s. 6d. to £4 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 5s. to £4. 15s. nett, Glasgow; caustic soda, white, 74° £7. 7s. 6d., 70/72° £6. 17s. 6d., 60/62° £6., and cream 60/62° £6., all nett, Liverpool; bleaching powder, 35/37°, £5. to £5. 10s. nett, Tyne; saltcake, 28s. 6d.; borax, English refined, £16., and boracic acid, £26. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s., nett, Liverpool; bichromate of potash, 3½d., less 6% for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d., less 6% for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow); chlorate of potash, 3½d, less 5% Liverpool; nitrate of soda, 7s. 6d. to 7s. 9d.; sulphate of ammonia, £10. 5s. 0d. prompt f.o.b. Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £23. early delivery, less 5% Liverpool; paraffin scale, hard, 1⅞d. to 2d. per lb., and soft 2d. per lb.; paraffin wax, 120° semi-refined, 2¼d. to 2½d. per lb.; paraffin spirit (naphtha), 9d. to 10d. per gal.; paraffin oil (burning), No. 1, 6½d.; and crystal, 7d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 15s. to £5. 5s., 885° £5. 10s. to £6., and 890/895° £6. 5s. to £6. 10s. Week's imports of sugar at Greenock were *nil*.

TYNE CHEMICAL REPORT.

TUESDAY.

Chemicals are steady though without alteration in prices with the exception of bleaching powder, which product has improved in demand and is now quoted generally at £5. 5s. to £5. 10s per ton, f.o.b. Soda crystals are firm at £2. 12s. 6d. per ton, gross weight, locally. Sulphur scarce at £4. 15s. per ton. Caustic soda unchanged.

Bleaching powder, softs, £5. 5s. per ton, nett; do., hards, £5. 10s. per ton, nett; caustic soda, 76/77%, £8. and 70%, £7. 0s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do, 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75°Tw., £2. 12s. 6d. per ton, nett; do., 100°Tw., £3. per ton, nett; do., 140°Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s od per ton, nett; blanc fixe, £6. 10s. per ton nett; chloride of barium, refined crystals, £6. 15s. od. per ton, nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt firm at 9s. 6d. per ton, f.o.b. Tees. Demand steady.

COALS.—In the coal trade the demand continues steady, and the advance in prices is fully maintained. Coke is in strong demand locally and likely to improve with the opening of the shipping season. To-day's prices are:—Best Northumbrian steam, 10s. 6d. to 10s. 9d. per ton; second qualities, 9s. 6d. to 9s. 9d. per ton; small steam 4s. 9d. to 5s. per ton; gas coals, 10s. to 11s. per ton; bunker coals, 8s. to 8s. 6d. per ton; household coals, 10s. to 11s. per ton; coke, 18s. to 21s. per ton.

New Companies.

British Asbestos Co., Ltd.—CAPITAL £50,000. in £10. shares. This company has been formed to acquire the business carried on by J. Boyd as "The British Asbestos Co.," to adopt agreements with J. Boyd and W. Menzies, to acquire mines and mining rights in Italy or elsewhere, and to buy, sell, manufacture, prepare for market and deal in asbestos, oil, grease, india-rubber, and packings. The subscribers to the memorandum of association are:—W. Menzies, 16, Mark-lane, E.C., merchant; J. Boyd, 16, Duke-street, Aldgate, E., merchant; J. Reid, 101, Leadenhall-street, E.C., merchant; A. Dey, 24, Ossian-road, Stroud Green, N., merchant; G. Duckworth, 10, Penmartin-road, Brockley, traveller; C. Boyd, 56, Hornsey Rise, N., clerk; C. E. Dahmann, 11, Weston Park, Crouch End, N., accountant.

Godfrey Calciner, Ltd.—CAPITAL £750. in £1. shares. This company has been formed to acquire, own, and work an invention relating to mechanically calcining furnaces.

Plymouth Fish, Guano, and Oil Co., Ltd.—CAPITAL £16,000, in £1. shares. This company has been formed to adopt an agreement with the South Coast Guano Co., Ltd., and to carry on the business of manufacturers of chemicals and chemical and other manures, driers of blood, and other matter, tallow melters, soap makers, bone boilers, glue and albumen makers, manufacturing chemists, etc. The subscribers to the memorandum of association are: J. Horswell, Ridgegrove Villa, Launceston, gentleman; E. S Skeels, 95, Holland-road, W., gentleman; G A Thompson, 63, Lansdowne-road, W., gentleman; J. Scaggall, 26, St. Paul's-road, Camden Town, N.W., accountant; H. C. Friend, 1, Fenchurch-avenue, E.C., fertiliser broker; A. Steward, 7, Union-court, Old Broad-street, E.C., secretary; A. O. Davies, 4, New-square, Lincoln's Inn, solicitor.

Santiago Nitrate Co., Ltd.—CAPITAL £200,000. in £5. shares. This company has been formed to acquire certain nitrate grounds and works belonging to the Compania de Salitres, known as "La Santiago," in Chili, to adopt an agreement with A. Torres, on behalf of the said company, and to carry on the business of miners, quarrymen, explorers, prospectors, and manufacturers of and dealers in nitrate, iodine, and other products. The subscribers to the memorandum of association are:—A. W. Boon, 134, Fenchurch-street, E.C., clerk; C. G. Kistner, 56, Woodstock-road, Finsbury Park, N., clerk; B. H. Bourne, 72, Meadow-road, Clapham-road, S.W., clerk; H. W. Bishop, Welmeadow-road, Hither Green, S.E., clerk; H. J. Kidd, 169, Milton-avenue, E. Ham, E., clerk; W. H. Behrens, 134, Fenchurch-street, E.C., solicitor.

William Pearce and Sons, Ltd.—CAPITAL £80,000 in £10. shares. This company has been formed to acquire the business carried on as William Pearce and Sons, to adopt an agreement with W. Pearce and J. S. Pearce, and to carry on the business of chemists, druggists, drysalters, oil and colourmen, etc. The subscribers to the memorandum of association are:—W. Pearce, Bow Common, E., manufacturer; Mrs. E. A. Pearce, The Elms, Woodford Green; J. R. Roberts, Woodford Green; J. S. Pearce, Bow Common, E., manufacturer; Mrs. F. M. Pearce, Clements, Snaresbrook, Essex; A. H. Pearce, The Limes, Nonington, Dover, architect; W. E. Moore, 21, College-hill, E.C., solicitor. Registered office, 1, Bow Common-lane, Poplar, E.

IMPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.

Week ending January 28th.

Acetic Acid—
Germany, 23 pks — Argo S. S. Co.

Acetone—
Germany, £40 — R. W. Greeff & Co.
Belgium, 3 dms. — E. Catlin

Ammonium Chloride—
Holland, £108 — H. Lorenz

Antimony Ore—
Japan, 5 t. — W. M. Smith & Sons

Barytes—
Germany, 38 pks. — J. L. Lyon & Co.
Holland, 106 — W. Harrison & Co.

Bleaching Powder—
Holland, 85 pks. — J. M. Steel & Co.
France, 182 cks. — ,,

Bone Meal—
E. Indies, 350 t. — A. Hunter & Co.

Bones—
China, 2 t. — P. & O. Co.

Boracic Acid—
Italy, 30 pks. — F. C. Devon & Co.

Bromine—
Holland, 60 cs. — A. & M. Zimmermann

Caoutchouc—
Zanzibar, 15 cs. — L. & I. D. Jt. Co.
Belgium, 20 — Prop. Bull Wf.
Straits, 100 — ,,
,, 56 — Elkan & Co.
,, 55 — Anderson, Weber & Smith
,, 61 — Huttenbach & Co.
Zanzibar, 3 — Hale & Son
Belgium, 18 — T. Ronaldson & Co.
U. States, 8 — L. & I. D. Jt. Co.
Straits, 76 — ,,

Castor Oil—
France, 25 brls. — Lucas & Spencer's Wf., Ld.
,, 10 cks. — F. Bochin
E. Indies, 60 dms. 50 cs. — Perkins & Homer
,, 45 cks. — J. W. Cook & Co., Ld.
Belgium, 56 brls. — W. T. Mills

Caustic Potash—
France, 20 dms. — Petri Brs.

Chemicals (*otherwise undescribed*)
France, £28 — Mory & Co.
Belgium, 540 — T. H. Lee
U. States, 90 — Lucas & Spencer's Wf., Ld.
Germany, 140 — Craven & Co.
,, 12 — E. J. Braesh
,, 7 — Argo S. S. Co.
,, 1,202 — A. & M. Zimmermann
,, 28 — Butler's Wf., Ld.
,, 50 — T. H. Lee
Belgium, 115 — John Cockerill Line
Holland, 350 — A. Hughes
,, 13 — Hernu, Peron & Co., Ld.
Germany, 13 — R. W. Greeff & Co.
Holland, 6 — T. H. Lee
Germany, 9 — Butler's Wf., Ld.
,, 89 — L. & I. D. Jt. Co.

Chlorine—
Germany, £26 — A. & M. Zimmermann

Copper Sulphate—
U. States, 21 brls. — Williams, Torrey & Co.

Copperas—
Germany, £72 — Argo S. S. Co.
,, 60 — Burgoyne & Co.

Cream of Tartar—
Holland, 25 pks. — Kirkpatrick, Barr & Co.
Spain, 5 — B. & F. Wf. Co., Ld.
,, 10 — W. C. Bacon & Co.
France, 8 — J. W. Cook & Co., Ld.
,, 5 — F. C. Devon & Co.

Dyestuffs (*otherwise undescribed*)
E. Indies, 31 pks. — Walker, Munsie & Co.

Dyestuffs—
Argols
Italy, 44 pks. — Thames S. T. & L. Co., Ld.
10 — Fellows, Morton & Co., Ld.

Cochineal
Canaries, 25 pks. — Sperling & Williams

Cutch
Rangoon, 200 pks. — A. Howden & Co.

Extracts
France, 25 pks. — B. & F. Wf. Co., Ld.
Holland, 21 — F. Claydon & Co.
France, 611 — T. H. Lee

Gambier
Straits, 919 pks. — P. & O. Co.
China, 2,416 — ,,
Straits, 228 — Brinkmann & Co.
,, 1,029 — Brown & Elmslie
,, 491 — Bellamy's Wf., Ld.
,, 1,008 — Adamson, Gilfillan & Co.

Indigo
E. Indies, 3 chts. — Parsons & Keith
,, 9 — Arbuthnot, Latham & Co.
,, 21 — J. Kenyon & Sons
Belgium, 2 cs. — John Cockerill Line
E. Indies, 80 chts. — Hatton, Hall & Co.
Holland, 2 — Lewis & Peat
E. Indies, 12 — Binny & Co.
,, 10 — E. Bower & Co.
,, 79 — L. & I. D. Jt. Co.
,, 16 — J. Owen
,, 140 — Croysdale & Co.
,, 1 — W. J. & H. Thompson
,, 6 — Dipnall & Co.
,, 130 pks. — A. B. Curtis & Co.
,, 16 chts. — Darling Brs.
,, 10 — Thomasset & Co.
,, 52 — J. W. Cook & Co., Ld.

Myrabolams
E. Indies, 1,029 pks. — Baxter & Hoare
,, 182 — Dalton & Young
,, 3,432 — J. R. Francis & Co.

Saffron
Spain, 2 pks. — Richardson, Spence & Co.

Shumac
Italy, 500 pks. — Dalton & Young
,, 28 — T. S. Harris & Co.

Tanners' Bark
Rangoon, 53 t. — Lon. & Til. Ltge. C. & D. Co.
Natal, 44 — A. & W. Nesbitt
,, 14 — Baxter & Hoare
Cape, 19 — Fellows, Morton & Co.
Natal, 21 — Bullard, King & Co.
,, 10 — Boutcher, Mortimore & Co.

Valonia
A. Turkey, 25 t. — A. J. Humphrey
,, 10 — Anning & Cobb

Farina—
Holland, 100 pks. — J. Barber & Co.
,, 100 — G. Hornzee

Glucose—

U. States,	250 pks.	250 cwts.	Fellows, Morton & Co.
,,	500	500	J. Clark & Son
,,	500	500	C. Mangold & Co.
,,	500	500	Bellamy's Wf., Ld.
France,	240	240	L. Norman & Co., Ld.
U. States,	160	160	C. S. Lovell
,,	500	500	Johnson's Saccharum Co.
,,	550	800	L. & I. D. Jt. Co.
,,	1,000	1,000	Pickford & Co.
,,	150	750	Lipton, Ld.
,,	10	60	L. Norman & Co., Ld.
,,	50	275	Oblenschlager
,,	1,940	1,940	R. G. Hall & Co.
,,	100	200	E. & T. Pink
,,	200	1,174	W. Grose & Co.

Glue—
Portugal, £29 — Mory & Co.
Holland, 24 — T. H. Lee
,, 27 — Phillipps & Graves
Belgium, 580 — T. M. Duche & Sons
,, 624 — T. Ronaldson & Co.
Canada, 55 — L. & I. D. Jt. Co.
Germany, 150 — U. States, 122 — Anglo-Am. Oil Co.
,, 31 — Armour & Co.
France, 103 — Mory & Co.
,, 265 — Burnett Brs. & Sons
,, 202 — T. M. Duche & Sons
Canada, 18 — Wingate & Co.
Holland, 320 — M. H. Voss
Belgium, 60 — Leach & Co.

Glue Stock—
Belgium, 42 brls. — Leach & Co.
Germany, 240 — Hicks, Nash & Co.
Pt. Elizabeth, 9 — Dyster, Nalder & Co.

Glycerine—
Holland, £420 — J. Barber & Co.
Germany, 100 — R. W. Greeff & Co.
,, 111 — Butler's Wf., Ld.
France, 35 — J. L. Lyon & Co.

Kainit—
Germany 100 t. — Anglo-Contl. Guano Wks.

Litharge—
Germany, 5 pks. — Butler's Wf., Ld.
Holland, 4 — J. Owen

Manure—
Holland, 50 t. — Hollinghurst & Co.
E. Indies, 50 — ,,
Germany, 49 — D. de Pass & Co.
E. Indies, 100 — A. Hunter & Co.
,, 250 — Vokins & Co., Ld.
,, 103 — Dundee, Perth, and London Shipping Co.

Methyl Alcohol—
France, 45 dms. — E. Catlin
U. States, 120 brls. — Parker & Co.

Mica—
E. Indies, £40 — W. M. Smith & Sons
U. States, 100 — W. Dixon

Molasses—
U. States, 50 brls. — 316 c. Bellingham, Smith, & Co.
,, 75 — 438 — Deering & Robottom
,, 50 — 315 — Barrett, Tagant, & Co.

Ochre—
Holland, 16 pks. — Phillipps & Graves
France, 378 — W. Harrison & Co.
,, 30 — J. W. Cook & Co., Ld.

Paraffin Scale—
U. States, 3,293 brls. — Anglo-American Oil Co.

Paraffin Wax—
U. States, 240 cs. — Anglo-American Oil Co.
Germany, 62 bgs. — Poth, Hille, & Co.

Phosphate—
France, 50 t. — Fox, Roy, & Co.

Phosphate Rock—
Belgium, 200 t. — Lawes Chemical Manure Co.

Plumbago—
Germany, 15 cks. — B. Gallaway
Ceylon, 559 brls. — J. Thredder, Son, & Co.
,, 103 — Beresford & Co.

Potassium Carbonate—
Germany, 100 cs. — Petri Brs.
,, 100 — J. M. Steel & Co.
France, 62 — J. A. Reid

Potassium Prussiate—
France, 38 cks. — Blagden, Waugh, & Co.

Potassium Sulphate—
Belgium, 12 cs. — Sawer, Sons, & Co.
Germany, 50 bgs. — F. W. Berk & Co., Ld.
,, 50 — T. H. Hendrichs

Rosin Oil—
France, 60 brls. — Barrett, Tagant, & Co.
Belgium, 10 — D. C. Thomas & Sons

Salicylic Acid—
Germany, 20 pks. — Butler's Wf., Ld.

Salt—
Portugal, 230 t. — Weston & Westall

Saltpetre—
E. Indies, 2,876 bgs. — Lucas & Spencer's Wf.
Germany, 16 cks. — P. Hecker & Co.

Soap—
Holland, £106 — Phillipps & Graves
,, 130 — C. Tennant, Sons, & Co.
,, 45 — T. H. Lee
France, 45 — W. Balchin
Belgium, 25 — T. H. Lee
Italy, 16 — Bailey & Leetham

Soda Ash—
U. States, 500 cs. — C. May
,, 1,000 — Furness, Withy, & Co.

Soda Crystals—
Holland, 200 cs. — Little & Johnston

Sodium Hyposulphite—
Holland, 200 cs. — R. W. Greeff & Co.

Sodium Sulphate
Holland, 28 cks. — H. Lorenz

Starch—
Holland, 110 pks. — Phillipps & Graves
,, 2,083 — Little & Johnston
,, 65 — Hernu, Peron, & Co.
U. States, 1,400 — J. Forsey
,, 80 — R. G. Hall & Co.
,, 120 — Anderson, Tullock, & Co.
,, 200 — C. Tennant, Sons, & Co.
Germany, 19 — Butler's Wf., Ld.
,, 1,932 — Horne & Co.
,, 8 — Craven & Co.
,, 40 — Argo S. S. Co.
Belgium, 50 — Hore & Scrivener
,, 280 — T. Ronaldson & Co.
,, 145 — Becker & Wagner
,, 97 — Leach & Co.
France, 200 — F. Claydon & Co.
,, 589 — E. & T. Pink

Stearine—
Holland, 54 bgs. — H. Hill & Sons

Tartar—
Italy, 38 pks. — Howards & Sons

Tartaric Acid—
France, 7 pks. — L. & I. D. Jt. Co.
Holland, 12 — Kirkpatrick, Barr & Co
,, 12 — F. C. Devon & Co.
,, 1 — B. & F. Wf. Co., Ld.

Ultramarine—
Belgium, 5 pks. — W. Harrison & Co.

Varnish—
U. States, 25 pks. — J. R. Francis & Co.
,, 14 — Atlantic Transport Co.

Verdigris—
France, 7 pks. — C. F. Gerhardt

Waste Salt—
Germany, 111 t. — Perkins & Homer

White Lead—
Holland, 50 cks. — A. & M. Zimmermann
,, 44 pks. — Burrell & Co.
,, 50 — T. & W. Farmiloe, Ld.
,, 46 — M. Ashby, Ld.
Belgium, 70 — J. R. Francis & Co.
,, 20 — T. & W. Farmiloe, Ld.
Germany, 29 — N. J. Fenner & Co.

Wood Pulp—
Sweden, 3,893 pks. — W. D. Cork
,, 244 — W. G. Taylor & Co., Ld.
Holland, 75 — Thames S. T. & L. Co., Ld.
Germany, 500 — E. J. & W. Goldsmith
,, 40 — Hernu, Peron, & Co., Ld.
Norway, 800 — W. D. Cork
,, 200 — Alsing & Co., Ld.
,, 400 — W. E. Bott & Co.
,, 536 — Johnsen & Jorgensen
U. States, 7,850 — Henderson, Craig, & Co.
Belgium, 1,692 — J. Harrison

Zinc Oxide—
France, 10 pks. — Kerestedji & Co.
Holland, 200 — J. Matton
,, 100 — M. Ashby, Ld.
U. States, 200 — ,,

Zinc White—
Holland, 43 pks. — Randall
,, 12 — H. B. Alder & Co
,, 50 — T. & W. Farmiloe, Ld.
Belgium — &

LIVERPOOL.

Week ending January 26th.

Antimony Ore—
Antofagasta, 120 bgs.
Bone Ash—
Campana, 855 bgs.
Bones—
Smyrna, 2,172 bls.
Boracic Acid—
Genoa, 80 cks.
Borax—
Valparaiso, 2,087 sks. H. Watson & Co.
Castor Oil—
Marseilles, 87 brls. 20 cs.
Leghorn, 573 bxs. 51 5 hf. pps. 5 qr. pps.
Calcutta, 210 cs. Ralli Bros.
Chalk—
Philadelphia, 2 cs.
Chemicals *(otherwise undescribed)*
Hamburg, 10 cs.
Chrome Ore—
Smyrna, 100 t.
Colours—
Hamburg, 2 cs. 6 dms.
Rotterdam, 1 ck. 6 tubs
Cottonseed Oil—
New York, 50 brls.
Charleston, 700
Cream of Tartar—
Bordeaux, 58 cks.
Dyestuffs—
Annatto
Bordeaux, 10 cks.
Argols
Bordeaux, 6 cks.
Extracts
Fiume, 3 cks. 204 brls.
Fustic
Savanilla, 1,764 logs G. H. Miller & Co.
Indigo
Calcutta, 166 chts.
Orchella
Lisbon, 135 brls
Shumac
Palermo, 750 bgs
Valonia
Smyrna, 120 t. 1,082 bgs.
Gelatine—
Bordeaux, 1 cs.
Havre, 2 pgs.
Glue—
Antwerp, 2 bls.
Rotterdam, 100 bgs.
Hamburg, 16 cks.
Litharge—
Antofagasta, 10 bgs F. Templeman
Manganese Ore—
Cartagena, Sp. 2,000 t.
Ochre—
Rotterdam, 2 cks.
Paraffin Scale—
New York, 297 brls. Thompson & Bedford
Phosphate Rock—
Brunswick, 1,261 t.
Pumice Stone—
Messina, 30 bgs.
Pyrites—
Huelva, 1,625 t. Matheson & Co.
Rosin—
Baltimore, 1,000 brls.
Saltpetre—
Calcutta, 324 bgs. Ralli Brs.
Hamburg, 12 cks. 60 kgs.
Soap—
Smyrna, 205 bxs.
Leghorn, 25 cs.
Naples, 388
Rotterdam, 14
Soapstone—
Bordeaux, 450 bgs. Geo. G. Blackwell, Sons & Co.
Genoa, 200 bgs.
Starch—
Hamburg, 136 cs.
Baltimore, 210 brls. J. Howard & Co.
Antwerp, 200 J. T. Fletcher & Co.
" 40
Bremen, 80
Rotterdam, 60 Browne, Geveke & Co
" 96
Stearine—
Antwerp, 13 bgs.
Sulphur—
Catania, 150 bgs. 34 brls.
Talc—
Genoa, 10 bgs.
Tallow—
San Francisco, 350 tcs. 500 brls.
Boston, 304
N. Orleans, 435
B. Ayres, 50 pps. South American Candle Co.
" 300 cks.
Tartaric Acid—
Hamburg, 4 cks.
Rotterdam, 4
Ultramarine—
Rotterdam, 20 cks.
Varnish—
New York, 18 brls. W. A. Warren
Rotterdam, 3 cks.
Waste Salt—
Hamburg, 100 bgs.
White Lead
Rotterdam, 32 cks.
Zinc Ashes—
Boston, 77 tcs. 36 brls.
Zinc Oxide—
New York, 130 brls.
Antwerp, 15

MANCHESTER.

Week ending January 28th.

Albumen—
Hamburg, 5 cks. R. Steinmann & Co.
Antimony Salt—
Hamburg, 2 cks. R. Steinmann & Co.
Bark Extract—
Baltimore, 20 brls. Houston & Laurisch
Barytes—
Antwerp, 400 bgs. J. T. Fletcher & Co.
Rotterdam, 12 cks. Wilson, 50 bgs. Sons, & Co., Ld.
Boracic Acid—
Hamburg, 10 cks. R. Steinmann & Co.
Borax—
Hamburg, 1 ck. R. Steinmann & Co.
Chalk—
Hamburg, 6 cs. R. Steinmann & Co.
Rouen, 6 Co-op. W'sale Society, Ld.
Chemicals *(otherwise undescribed)*
Gothenburg, 1 dm. Felber, Jucker, & Co.
Hamburg, 3 cks. R. Steinmann & Co.
Rotterdam, 7 Wilson, Sons, & Co., Ld.
Chrome Potash—
Hamburg, 1 ck. R. Steinmann & Co.
Colours—
Antwerp, 5 cks. J. T. Fletcher & Co.
Hamburg, 4 R. Steinmann & Co.
Rotterdam, 127 28 cs. 19 bxs. 54 brls. Wilson, Sons, & Co., Ld.
Cream of Tartar—
Rotterdam, 20 kgs. Wilson, 6 cks. Sons, & Co., Ld.
Dyewood Extract—
New York, 25 brls. Lamport & Holt
Earth Colours—
Hamburg, 4 cks. R. Steinmann & Co.
Farina—
Hamburg, 770 bgs. R. Steinmann 10 dms. & Co.
Gelatine—
Hamburg, 1 cs. R. Steinmann & Co.
Glucose—
New York, 50 brls. Lamport & Holt
Rotterdam, 10 cks. Wilson, Sons, & Co., Ld.
Glue—
Antwerp, 10 cks. J. T. Fletcher 40 bls. & Co.
Hamburg, 4 cks. 10 bgs. R. Steinmann 27 cs. & Co.
Rotterdam, 50 bgs. Wilson, Sons, & Co., Ld.
Rouen, 38 cks. Co-op. 20 bls. W'sale Soc., Ld.
Glue Stock—
Hamburg, 27 bgs. R. Steinmann & Co.
Glycerine—
Antwerp, 10 cks. J. T. Fletcher & Co.
Lead Acetate—
Hamburg, 5 cks. R. Steinmann 4 kgs. & Co
Limestone—
Antwerp, 2 crts. J. T. Fletcher 8 cs. & Co
Litharge—
Rotterdam, 48 bgs. Wilson, Sons, & Co., Ld.
Methyl Alcohol—
Antwerp, 3 dms. J. T. Fletcher & Co.
Paraffin Scale—
New York, 434 brls. Lamport & 620 cs Holt
Potash—
Antwerp, 10 cks. J. T. Fletcher & Co.
Hamburg, 58 dms. R. Steinmann & Co.
Potassium Chlorate—
Gothenburg, 110 cks. Felber, Jucker, & Co.
Potassium Muriate—
Hamburg, 50 cks. 12 dms. R. Steinmann 10 pks. & Co.
Potassium Prussiate—
Rouen, 1 cs. Co-op. W'sale Society, Ld.
Saltpetre—
Hamburg, 40 kgs. R. Steinmann & Co.
Silicate Acid—
Hamburg, 5 cs. R. Steinmann & Co.
Soap—
Rotterdam, 3 cs. Wilson, Sons, & Co., Ld.
Rouen, 20 dms. Co-op. W'sale Society, Ld.
Soda—
Hamburg, 11 cks. R. Steinmann & Co.
New York, 21 cs. Lamport & Holt
Sodium Nitrate—
Rotterdam, 15 cks. Wilson, Sons, & Co, Ld.
Sodium Prussiate—
Antwerp, 7 cks. J. T. Fletcher & Co.
Starch—
Antwerp, 80 cs. J. T. Fletcher & Co.
Hamburg, 50 cks. R. Steinmann 144 cs. & Co.
New York, 6,401 bgs. Lamport & Holt
Rotterdam, 145 cs. Wilson, Sons, & Co., Ld.
Stearine—
Rotterdam, 26 bls. Wilson, Sons, & Co., Ld.
Tan Extract—
Rouen, 25 cks. Co-op' W'sale Society, Ld.
Tannic Acid—
Hamburg, 4 cks. R. Steinmann & Co.
Tar Salt—
Hamburg, 4 cks. R. Steinmann & Co.
Tartar—
Rotterdam, 4 cks. Wilson, Sons, & Co., Ld.
Tartaric Acid—
Hamburg, 3 cks. R. Steinmann & Co.
Rotterdam, 16 Wilson
20 kgs. Sons, & Co., Ld.
Ultramarine—
Hamburg, 10 cs. R. Steinmann & Co.
Rotterdam, 4 cks. Wilson, Sons, & Co., Ld.
Varnish—
Hamburg, 2 cks. R. Steinmann & Co.
Waste Salt—
Hamburg, 1,100 bgs. R. Steinmann 10 cks. & Co.
White Lead—
Antwerp 6 cks. J. T. Fletcher & Co.
Rotterdam, 12 Wilson, Sons, & Co., Ld.
Wood Pulp—
Christiania, 4,130 bls. W. H. Ingram
Drammen 50¾ bdls. "
" 4,336 bls. W. H. Stott & Co.
Gothenburg, 854 Felber, Jucker, 1 pcl. & Co.
Hamburg, 1,200 pks. R. Steinmann & Co.
Skien, 1,014 bls. W. H. Ingram
Zinc Oxide—
Antwerp, 5 cks J. T. Fletcher 40 brls. & Co.
New York, 100 Lamport & Holt

HULL.

Week ending January 28th.

Acetic Acid—
Bremen, 35 crbys. Veltmann & Co.
Albumen—
Riga, 4 cks. Helmsing & Son
Alizarine—
Rotterdam, 1 bx. 16 brls. 47 pks. Hull & Netherlands S. S. Co.
Antimony—
Hamburg, 5 cs. Wilson, Sons, & Co., Ld.
Barytes—
Amsterdam, 21 cks. Hull & Netherlands S. S. Co.
Bremen, 76 Sissons Brs. & Co.
Rotterdam, 82 Hull & Netherlands S. S. Co.
Chemicals *(otherwise undescribed)*
Antwerp, 40 cks. Wilson, Sons, & Co., Ld.
Danzig, 13 "
Dunkirk, 58 pks. "
Ghent, 50 bgs. "
Hamburg, 1 ck. Bailey & Leetham, Ld.
Rouen, 10 cks. Wilson, Sons, & Co., Ld.
Colours—
Antwerp, 9 pks. Wilson, 25 cks. Sons, & Co., Ld.
" 1 Furley & Co.
Bremen, 3 cs. J. Pyefinch & Co
Rotterdam, 120 pks. 17 cs. 74 brls. 38 cks. Hull & Netherlands S. S. Co.
Cottonseed Oil—
New York, 25 brls. Wilson, Sons, & Co., Ld.
Cream of Tartar—
Bordeaux, 5 cks. W. Moran & Co.
Creosote Salts—
Rotterdam, 17 cks. Hull & Netherlands S. S. Co.
Cryolite—
Danzig, 19 cks. Wilson, Sons, & Co., Ld.
Earth Colour—
Amsterdam, 2 cks. Hull & Netherlands S. S. Co.
Bremen, 13 Blundell, Spence, & Co.
Farina—
Stettin, 550 bgs. Wilson, Sons, & Co., Ld.
Glucose—
Rotterdam, 60 cks. Hull & Netherlands S. S. Co.
Glue—
Drontheim, 1 brl. Wilson, Sons, & Co., Ld.

Dunkirk, { 32 bls. 68 cks. "
Rotterdam, 3 bgs. Hull & Netherlands S. S. Co.
Stockholm, 35 Wilson, Sons, & Co., Ld.

Glue Stock—
Dunkirk, 25 bls. Wilson, Sons, & Co., Ld.
Hamburg, 8 "
Rouen, 106 "

Hydrofluoric Acid—
Hamburg, 4 cs. Bailey & Leetham, Ld.

Indigo—
Rotterdam, 15 brls. Hull & Netherlands S. S. Co.

Lead Acetate—
Hamburg, 8 cks. Bailey & Leetham, Ld.

Lithopone White—
Amsterdam, 20 cks. Hull & Netherlands S. S. Co.

Ochre—
Rouen, 31 cks. Wilson, Sons, & Co., Ld.

Phosphate—
Dunkirk, 241 t. Wilson, Sons, & Co., Ld.
Ghent, 500 bgs. "

Phosphate Rock—
Bona, 1,600 t. Hammond, Emes, & Co.

Pitch—
Konigsberg, 21 cks. Wilson, Sons, & Co., Ld.

Potash—
Hamburg, 1 dm. Bailey & Leetham, Ld.

Rosin Oil—
Bordeaux, 26 brls. W. Moran & Co.

Saltpetre—
Antwerp, 185 bgs. Wilson, Sons, & Co., Ld.

Soap—
New York, 632 pks. Wilson, Sons, & Co., Ld

Sodium Sulphide—
Amsterdam, 3 dms. Hull & Netherlands S. S. Co.

Starch—
Amsterdam, 40 cs. Hull & Netherlands S. S. Co.
20 bgs.
Antwerp, 284 cs. Wilson, Sons & Co., Ld.
Bremen, 1,311 pks. Veltmann & Co
782 cs.
Ghent, 196 Wilson, Sons, & Co., Ld.

Stearine—
Antwerp, 50 bgs. Wilson, Sons, & Co., Ld.

Tallow—
Dunkirk, 154 cks. Wilson, Sons, & Co., Ld.
Hamburg, 20 tcs. "
New York, 315 pks. "

Tannin Extract—
Hamburg, 1 pk. Bailey & Leetham, Ld.

Tar—
Konigsberg, 260 brls. Bailey & Leetham. Ld.
" 100 cks. Wilson, Sons, & Co., Ld.
Panderma, 39 Helmsing & Son

Tartaric Acid—
Rotterdam, 4 cks. Hull & Netherlands S. S. Co

Turpentine—
Bordeaux, 6 cks. W. Moran & Co,
Panderma, 52 Helmsing & Son

Ultramarine—
Rotterdam, 1 ck. Hull & Netherlands S. S. Co.

Varnish—
Antwerp, 3 cs. Wilson, Sons, & Co., Ld.

Waste Salt—
Hamburg, 300 bgs. Bailey & Leetham, Ld.

White Lead—
Amsterdam, 72 cks. Hull & Netherlands S. S. Co.
Antwerp, 11 Bailey & Leetham, Ld.
Rotterdam, 10 Hull & Netherlands S. S. Co.

Wood Pulp—
Christiania, 975 bls. Wilson, Sons, & Co., Ld.
Drontheim, 600 "
Gothenburg, 252 pks. Bailey & Leetham, Ld.
Hamburg, 4 bls. "
Hango, 196 Pederson & Co.

Zinc Oxide—
Rotterdam, 10 cks. Hull & Netherlands S. S. Co.

Zinc White—
Amsterdam, 25 cks. Hull & Netherlands S. S. Co.

GLASGOW.

Week ending February 2nd.

Acetic Acid—
Rouen, 10 cks. J. & P. Hutchison

Alum—
Antwerp, 13 cks. Clyde Shipping Co., Ld.

Alumina Sulphate—
Ghent, 150 bgs. Clyde Shipping Co., Ld.

Ammonium Nitrate—
Antwerp, 60 brls. Crawford & Co.

Aniline Salt—
Rotterdam, 4 cks. J. Rankine & Son

Asbestos—
Genoa, 29 bls. J. Bruce & Co.

Barium Sulphate—
Antwerp, 68 cks. Clyde Shipping
500 bgs. Co., Ld.

Barytes—
Hamburg, 25 cks. J. Currie & Co.

Bleaching Powder—
Rotterdam, 30 cks. J. Rankine & Son

Boracic Acid—
Leghorn, 9cks. 10 brls. J. Bruce & Co.

Castor Oil—
Antwerp, 1 ck. Clyde Shipping Co., Ld.
Leghorn, 50 cs. J. Bruce & Co.
Marseilles, 1 ck. "
Ghent, 6 cks. Clyde Shipping Co., Ld.

Chalk—
Rouen, 2 cs. J. & P. Hutchison

Chemicals *(otherwise undescribed)*
Rotterdam, 3 cks. J. Rankine
3 cs. & Son

Colours—
Rotterdam, 4 cks 8 brls. J Rankine
1 bx. 88 pks & Son
Hamburg, 3 cs. J. Currie & Co.

Cream of Tartar—
Barcelona, 5 cks. J & A. Roxburg
Genoa, 5 brls. J. Bruce & Co.

Cutch—
Rangoon, 350 cs. P. Henderson & Co.

Dried Blood—
Genoa, 3 bls. J. Bruce & Co.

Dyestuffs—
Alizarine
Rotterdam, 20 cks. J. Rankine & Son
Aniline
Amsterdam, 1 ck. J. Rankine
1 cs. & Son
Rotterdam, 3 cks. 6 cs. "
Hamburg, 4 1 J. Currie & Co.

Farina—
Delfszyhl, 800 bgs. J. Rankine & Son
Danzig, 120 J. Currie & Co.

Fluorchrome—
Rotterdam, 2 cks J. Rankine & Son

French Chalk—
Fiume, 420 bgs. Drysdale, McNair & Co.
Leghorn, 6 cs. J. Bruce & Co.

Glucose—
Portland, M., 203 brls. W. Kerr & Co.

Glue—
Fiume, 100 bgs. T. Duche
" 90 bgs. Drysdale,
400 bls. McNair & Co.
Rouen, 39 cks. J. & P.
25 bls. Hutchison
Hamburg, 10 bgs. J. Currie & Co.
Antwerp, 5 cks. Crawford & Co.
Genoa, 28 J. Bruce & Co.
Ghent, 14 Clyde Shipping Co., Ld.
New York, 82 brls. Dunlop Brs.
Rotterdam 10 cs. J. Rankine & Son

Oak Extract—
Fiume, 204 brls. Drysdale, McNair & Co.

Ochre—
Rouen, 139 cks. J. & P. Hutchison

Oxalic Acid—
Antwerp, 1 ck. Crawford & Co.
Rotterdam, 20 cks. J. Rankine & Son

Paint—
New York, 2 cs. Dunlop Bros.
" 100 kgs. Mungo, Gray & Co.

Painters' Colours—
Antwerp, 2 cks. Clyde Shipping Co, Ld.

Paraffin Wax—
Rangoon, 241 cs. P. Henderson & Co.

Plumbago—
Genoa, 430 bgs. J. Bruce & Co.

Potash—
Rotterdam, 10 cks. J. Rankine & Son
Hamburg, 31 dms. J. Currie & Co.

Potassium Carbonate—
Hamburg, 39 cks. J. Currie & Co.

Potassium Cyanide—
New York, 4 cs. Mungo, Gray & Co.

Saltpetre—
Calcutta, 1 bx. William Maclay
Hamburg, 25 cks. J. Currie & Co.

Soap—
Fiume, 14 cs Drysdale, McNair & Co.
New York, 1 2,500 bxs. Dunlop Brs.
Leghorn, 70 J. Bruce & Co
Ghnoa, 14 "
Marseilles, 2 "

Soda—
Rouen, 14 cks. J. & P. Hutchison
Genoa, 281 brls. J. Bruce & Co
Rotterdam, 15 cks. J. Rankine & Son

Starch—
Fiume, 150 bgs. J. Anderson & Co
" 70 Drysdale, McNair & Co.
New York, 100 Dunlop Bros.
Portland, M., 600 bgs. W. Kerr & Co.
New York, 328 sks. Mungo, Gray & Co.

Stearine—
Amsterdam, 92 cks. J. Rankine & Son

Sulphur Ore—
Huelva, 1,430 t. Rio Tinto Co.,
Seville, 1,330 Seville Sulphur & Copper Ore Co.

Tartaric Acid—
Trieste, 40 brls. W. Bunten & Co.
Rotterdam, 27 cks. J. Rankine & Son

Varnish—
Antwerp, 1 brl. 1 cs. Crawford & Co.
New York, 6 brls. Dunlop Brs.
" 4 Mungo, Gray & Co.

Waste Salt—
Hamburg, 102 bgs. J. Currie & Co

White Lead—
Hamburg, 22 cks. J. Currie & Co.
Rotterdam, 20 cs. J. Rankine & Son
Antwerp, 5 cks. Clyde Shipping Co., Ld.

Whiting—
Rouen, 13 cks. J. & P. Hutchison

Wood Pulp—
Portland, M., 180 bls. W. Kerr & Co.
Rotterdam, 179 J. Rankine & Sons
Christiania, 747 J. T. Salvesen & Co.
Christiansand, 30 J. T. Salvesen & Co.

Zinc Oxide—
Antwerp, 30 cks. Clyde Shipping
1 cs. Co., Ld.
Rotterdam, 25 cks. J. Rankine
New York, 40 brls Mungo Gray & Co.

TYNE.

Week ending January 28th.

Antimony Ore—
Tampico, 1,066 sks. Cookson & Co.

Asbestos—
Hamburg, 32 bgs. Tyne S. S. Co.

Barytes—
Antwerp, 350 bgs. Tyne S. S. Co.
Rotterdam, 19 cks. "

Chemicals *(otherwise undescribed)*
Hamburg, 5 cks. Tyne S. S. Co.

Glue—
Rotterdam, 2 cks. Tyne S. S. Co.

Lead Acetate—
Hamburg, 1 ck. Tyne S. S. Co.

Limestone—
Antwerp, 8 crts. Tyne S. S. Co.

Plumbago—
Hamburg, 4 cks. Tyne S. S. Co.

Pyrites—
Huelva, 1,345 t. Tharsis Sulphur & Copper Co.

Starch—
Rotterdam, 140 cs. Tyne S. S. Co.

Wood Pulp—
Bergen, 24 bls. P. H. Matthiessen & Co.
Gothenburg, 2 pks.
Skien, 600 cs.

Zinc Oxide—
Rotterdam, 20 cks. Tyne S. S. Co.

GOOLE.

Week ending January 25th.

Alizarine—
Rotterdam, 50 cks. 3 cs. 86 pks.

Aniline—
Hamburg, 23 cks. 1 cs.
Rotterdam, 204 32

Caoutchouc—
Boulogne, 2 cks.

Chemical Salts—
Hamburg, 1 cs.

Colours—
Hamburg, 3 cks. 3 cs.

Dyestuffs *(otherwise undes.)*—
Antwerp, 3 cks.
Boulogne, 157 39 pks.
Rotterdam, 72 18 cs.

Farina—
Hamburg, 700 bgs.

Glue—
Boulogne, 9 pks.

Indigo—
Rotterdam, 10 brls.

Nitrate Salt—
Hamburg, 8 cks.

Painters' Colours—
Hamburg, 3 cs.

Potash—
Dunkirk, 20 cks.
Hamburg, 4 dms.

Saltpetre—
Antwerp, 85 bgs.
Hamburg, 30 kgs.
Rotterdam, 200 bgs.

GRIMSBY.

Week ending January 28th.

Caoutchouc—
Antwerp, 2 cs.
Hamburg, 2

Chemicals *(otherwise undescribed)*
Antwerp, 7 cks. 1 cs.
Hamburg, 19 2 pks.

Colours—
Antwerp, 23 cks. 128 pks.
Hamburg, 33 10 cs. 327
Rotterdam, 9 1

Glue—
Antwerp, 2 cks. 10 bls.

Indigo—
Antwerp, 10 cs.
Hamburg, 6
Rotterdam, 11 chts.

Salt—
Hamburg, 499 bgs.

Varnish—
Antwerp, 6 cs.

EXPORTS OF CHEMICAL PRODUCTS

AT

THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending February 1st.

Acids—
Sydney, 27 cks. £139
Madras, 5 pks. 13
Alkali—
Hong Hong, 2 c. £8
Alum—
Mogador, 18 t. 6 c. £94
Ammonia—
Singapore, 47 pks. (pt.) £75
Adelaide, 15 cs. 21
Colombo, 3 20
Ammonia (Anhydrous)—
Dusseldorf, 25 cyldrs. £60
Ammonium Carbonate—
B. Ayres, 1 t. £28
Singapore, 9 c. 15
Paris, 2 62
Ammonium Muriate—
Melbourne, 3 t 4 c. £59
Ammonium Sulphate—
Cullera, 203 t. £2,230
Martinique, 121 15 c 1,310
Hamburg, 50 515
Demerara, 50 1 499
Bremen, 210 2,145
Bleaching Powder—
E London, 13 c. £5
Borax—
Adelaide, 1 t. 2 c. £18
Auckland, 3 45
Rotterdam, 50 cks. 75
Durban, 20 kgs. 17
Carbonic Acid Gas—
Cape Town, 20 cs. £10
Caustic Potash—
E. London, 2 t. 4 c. £56
Caustic Soda—
Adelaide, 4 c. £13
Auckland, 4 t 19 28
Nelson, 6 14
Hiogo, 30 150
Melbourne, 3 8 59
Brisbane, 1 4 13
Townsville, 1 10
Chemicals (*otherwise undescribed*)
Mauritius, 26 pks. £39
Townsville, 8 31
Las Palmas, 357 bgs. 270
Melbourne, 100 kgs. 183 472
Genoa, 12 114
Cologne, 5 30
New York, 25 hds. 130
Hamburg, 20 233
Fremantle, 2 cs. 40
Brussels, 25 149
Brisbane, 3 12
Rotterdam, 50 281
Madras, 15 4 63
Bombay, 11 6 56
Stettin, 2 cks. 11
B. Ayres, 1 2 39
Auckland, 17 pks. (pt.) 1 33
Durban, 2 44
Rosario, 2 11
San Francisco, 20 dms. 38
M. Video, 20 88
Lisbon, 5 29
Gibraltar, 5 31
Nagasaki, 1 15
Citric Acid—
Lisbon, 5 cks. £29
Singapore, 1 cs. 6
Reval, 25 kgs. 146
Amsterdam, 5 1 t. 147
Melbourne, 31 190
Durban, 2 c. 10
Coal Products—
Treport, 2 dms. £15
Aniline
Calcutta 2 cs. £45
Rotterdam, 12 dms. 450
Aniline Oil
Ghent, 1 ck. £10
Carbolic Acid
Boston, 7 pks. £39
Sydney, 10 dms. 5
St. Kitts, 1 cs. 5
Coal Tar Dyes
Auckland, 6 cs. £93
Boulogne, 8 100
Boston, 4 pks. 49
Creosote Salts
Philadelphia 1,219 bgs. £351
Naphtha
Auckland, 6 dms. £6
Melbourne, 10 cs. 103 80
Naphthaline
Bordeaux, 51 bgs. £29
Cologne, 17 cks. 151
Paris, 90 60 104
Pitch
Alexandria, 100 cks. £25
Antwerp, 775 t. 852
Auckland, 6 cs 3 brls. 8
Dunkirk, 150 185
Dusseldorf, 57 130
Malta, 100 28
Rangoon, 25 cks. 8
Rotterdam, 1,085 965
Seville, in bulk 1,825
St. Panzaire, 984 t. 1,130
St. Vincent, 5 5
Terneizen, 455 796
Tar
Calcutta, 20 rnlts. £35
Durban, 330 dms. 28
Wellington, 30 6
Melbourne, 25 6
Delagoa Bay, 60 2
Copperas—
Pt. Elizabeth, 5 frkns. £12
Copper Sulphate—
Treport, 10 t. 19 c. £190
Bordeaux, 108 5 2,314
Paris, 136 2,995
Nelson. 13 12
Amsterdam, 10 16 184
Treport, 26 13 518
Zanzibar, 11 10
Corfu, 12 11
Cream of Tartar—
Wellington, 10 c. £38
Normanton, 10 40
Fremantle, 5 20
Karachi, 10 60
Napier, 5 19
bluff 1 t. 76
Disinfectants—
Hamburg, 5 cks. £15
Sydney, 20 cs. 16
Colombo, 9 21
Adelaide, 48 pks. 45
Hong Kong, 4 13
Shanghai, 15 35
Trinidad, 63 68
Madras, 200 dms. 160
Cape Town, 3 13
Brisbane, 30 42
Fluoric Acid—
Hong Kong, 2 cs. £16
Glycerine—
Newport News, 20 cks. £360
Hydrochloric Acid—
Cape Town, 20 cs. £15
Manure—
Cullera, 447 t. £1,915
Chinde, 10 52
Demerara, 50 450
Berbice. 25 240
Lyttelton, 200 600
Martinique, 176 15 c. 1,450
Malaga 37 296
Bordeaux, 60 170
Jersey, 163 16 1,103
Cape Town, 58 19 458
Durban. 20 95
Guernsey, 10 49
Oxalic Acid—
Madras, 10 kgs. £17
Potassium Bichromate—
Calcutta, 1 t. £32
Potassium Carbonate—
Adelaide, 12 c. £10
Potassium Chlorate—
Madras, 20 kgs. £27
Melbourne, 1 t. 8 c. 45
Brisbane, 3 5
Bombay, 2 71
Potassium Cyanide—
E. London, 15 t. £1,601
Bombay, 5 cs. 23
Pt. Elizabeth, 1 10 c. 171
Melbourne, 9 13 811
Auckland, 5 510
Delagoa Bay, 34 5,015
Sydney, 4 405
Townsville, 15 1,710
Brisbane, 1 125
Fremantle, 6 19 751
Potassium Prussiate—
Yokohama, 1 t. £63
Salammoniac—
Samsoun, 10 c. £17
Melbourne, 5 10
Salt Cake—
Ghent, 140 t. £245
Antwerp, 140 245
Saltpetre—
Oporto, 1 t. 15 c. £36
Newport News, 13 15 284
Nelson, 10 10
Melbourne, 5 7 107
Auckland, 3 66
Sheep Dip—
B. Ayes, 405 cks. 27 t. 15 c. £1,042
Soap Lyes—
Newport News, 20 cks. £360
Soda—
Colombo, 16 c. £5
Antwerp, 4 t. 18 15
Soda Crystals—
Cape Town, 2 t. 10 c. £9
Sodium Bicarbonate—
Normanton, 1 t. £6
Fremantle, 12 c. 8
Sodium Nitrate—
Oporto, 4 t. 2 c. £34
Sulphite Lime—
Toronto, 1 t. 2 c. £213
Sulphur—
New York, 5 cks. £18
Sulphur Dioxide—
Melbourne, 10 cs. £70
Sulphuric Acid—
Aden, 10 cs. £17
Cape Town, 25 16
Durban, 20 16
Superphosphates—
Adelaide, 250 t. £683
Tartaric Acid—
Fremantle, 3 c. £17
Cape Town, 5 28
Boulogne, 5 23
Nelson, 1 t. 18 208
Napier, 2 11
Boston, 1 109
Auckland, 15 85

LIVERPOOL.

Week ending February 1st.

Alizarine Colours—
New York, 32 cks. 1 cs. 3 dms.
Alkali—
Canada, 9 t. 1 c. 1 q. £40
Malta, 5 1 20
B. Ayres, 3 16 5 19
Corinto, 4 17 3 20
Tampico, 4 17 3 20
Bilbao 9 5 40
Cartagena, 3 1 2 15
Barcelona, 16 16 3 65
E. London, 5 4 2 25
Salonica, 4 17 3 20
Piræus, 11 2 2 50
Natal, 1 5
Genoa, 12 16 2 50
Lisbon, 14 14 1 60
Oporto, 10 10 45
Antwerp, 19 3 5
Mexico City, 10 1 45
Melbourne, 9 16 60
Vera Cruz, 15 14 1 60
Seville, 16 4 5 65
Sydney, 4 7 2 11
Alum—
Smyrna, 6 t. £30
Ammonia—
B. Ayres, 19 c. 3 q. £26
Ammonium Alkali—
Leghorn, 9 t. 17 c. £38
Genoa, 10 39
Ammonium Carbonate—
Valparaiso, 1 t. 15 c. £52
Marseilles, 15 1 q. 22
Hamburg, 10 18
Hiogo, 2 3 55
Yokohama, 3 5 86
Pernambuco, 12 2 17
Ammonium Chloride—
Hamburg, 5 c. £7
Ammonium Muriate—
Philadelphia, 37 t. 6 c. 1 q. £836
Ammonium Sulphate—
Valencia, 129 t. 4 c. £1,400
Colombo, 3 30
Alexandria, 3 31
Genoa, 127 8 1,280
Venice, 40 411
Gd. Canary, 30 290
Olessa, 201 5 2,113
New York, 176 13 1 849
Cullera, 50 450
Demerara, 299 11 3,119
Philadelphia, 102 4 1,058
San Francisco, 155 1,627
Las Palmas, 98 16 308
Teneriffe, 21 10 225
Aniline Colour—
Boston 2 kgs.
Hespeler, 2
Philadelphia, 2 5 cks. 2 brls.
Venice, 5
Sydney, 2 cs. 6 pks.
Aniline Dye—
New York, 20 cks.
Aniline Oil—
Boston, 10 dms.
Philadelphia, 20
Aniline Salt—
Boston, 50 cs.
Antimony—
San Francisco, 7 c. £9
Arsenic—
Vera Cruz, 12 c. £10
Basic Slag—
Demerara, 110 t. £253
Bleaching Powder—
Amsterdam, 30 cks.
Bombay, 61 cs.
Boston, 657
Chicago, 28 91 brls.
Leghorn, 20
Milwaukee, 82
M. Video, 16 bxs.
New York, 50 dms.
Philadelphia, 81
Rotterdam. 15
San Sebastian, 77
Boracic Acid—
Rotterdam, 4 c. £4
Pombay, 11 2 q. 14
Borax—
Rotterdam, 26 t 12 c. £381
Demerara, 3 3 q. 5
Curacao, 2 1 3
Ghent, 4 18 1 80
Antwerp, 2 1 3 34
M Video, 1 18 1 31
Vera Cruz, 1 3 15
B. Ayres, 3 1 3 72
Hamburg, 10 12 1 170
Sydney, 7 101
E. London, 100 kgs. 98
Calcium Chloride—
M. Video, 1 t. 1 c £3
New York, 9 10 23
Carbolic Acid—
Rotterdam, 15 t. £504
Hamburg, 6 c. 2 q. 26

Antwerp, 1 10 110
Leghorn, 10 3 36
Venice, 4 cks. 10 3 36
Sydney, 12 22
N. York, 15 4 14 1 180

Caustic Potash—
Natal, 4 c. £5

Caustic Soda—
Adelaide, 46 dms.
Alexandria, 56
Algoa Bay, 10 cs.
Amsterdam, 160
Antwerp, 51
Barcelona, 229 90 cks.
B. Ayres, 150
Barranquilla, 25
Bombay, 77
Calcutta, 14 25
Callao, 50
Ceara 10
Copenhagen, 10
E. London, 9 cs.
Hiogo, 200
Hong Kong, 80
Johannesburg, 13 3
Malaga, 30
Malta, 30
Marseilles, 20
Melbourne, 92 10 14 pks.
Mexico City, 57
M. Video, 68
Naples, 16
Oporto, 60
Puerto Cabella, 20
Rio de Janeiro, 20
Rotterdam, 42
Rouen, 20
San Francisco, 50
San Juan, 12
Seville, 130
Sydney, 30
Tripoli, 6
Valencia, 50
Vigo, 3
Yokohama, 100

Chemicals *(otherwise undescribed)*
Valencia, 2 t. 3 c. £34
New York, 6 10
Barcelona, 2 3 34
Calcutta, 30 15 77
Madras, 1 5
Philadelphia, 14 363
Habana, 6 19 22
Perth, 1 16

China Clay—
Barcelona, 10 cks.
Melbourne, 140 bgs.
Rio de Janeiro 30

Coal Tar—
Philadelphia, 63 brls.

Copperas—
Beyrout, 2 t. 10 c. £7

Copper Sulphate—
Trieste, 15 c. £12
Naples, 12 t. 5 3q. 213
Nantes, 3 11 68
Ghent, 4 18 75
Callao, 2 34
Algiers, 49 2 841
Kurrachee, 1 5 20
Bordeaux, 711 4 1 13,773
Piræus, 5 14 100
Genoa, 87 3 6 1,819
Cette, 94 6 4 1,874
Catania, 8 18 2 168
Lisbon, 10 2 1 192
Marseilles, 54 14 1,056
Catacolo, 21 4 3 424
Leghorn, 9 17 3 181
Venice, 59 18 4 1,259
Ancona, 4 19 94
Rouen, 4 19 2 99

Creosote Oil—
Bordeaux, 200 cks. 200 brls.

Disinfectants—
Bombay, 1 t. £17
Sydney, 1 9 c. 1 q. 8
Rangoon, 15 130
Calcutta, 3 15 38
Cape Town, 1 cs. 25 dms. 33

Disinfectants and Sheep Dip—
Dunedin, 3 t. 18 c. 8 q. £28

Dyewood Extract—
Milano, 20 brls.
New York, 25

Glycerine—
New York, 2 c. 1 q. £19
Hamburg, 24 16 1,016
Genoa, 1 48
Canada, 2 19 1 550
Bombay, 10 cs. 12 58
Hiogo. 1 10 90
Santiago de Cuba, 2 6
Sydney, 6 18 3 263

Guano—
Malaga, 19 t. 18 c. £140

Lead Acetate—
Sydney, 10 c. 2 q. £14

Magnesia—
Paris, 25 cs.
Rouen, 60

Magnesium Carbonate—
Rio de Janeiro, 3 cs.

Magnesium Sulphate—
Pernambuco, 115 bgs.
Rio de Janeiro, 200

Paint—
Algiers, 40 dms.
Ambrizette, 2 cks.
Assinee, 20 kgs.
Belize, 105 pks.
Cadiz, 70 dms.
Calcutta, 4 cks.
Cavite, 60 dms.
Ceara, 5 pks.
Curacao, 27
Demerara, 185 3 cks.
Gibralar, 2
Gd. Canary, 50
Hamburg, 10
Havana, 2
Limon, 10 cs.
Maranham, 2
Matanzas, 2
Mexico City, 25 5
Montreal, 2
Pernambuco, 1
Pt. Natal, 70 3
Porto Plata, 6

Painters' Colours—
Callao, 27 cs.
Christiania, 80 cks.
Genoa, 300 pks.
Madras, 8
Maaquez, 4 brls.
Para, 1 2 27
Rotterdam 2
Seville, 15
Maranham, 10 kgs. 2 24
Mollendo 16
N. Orleans, 30 215
San Juan, 4 cks. 37 bxs.

Paraffin Wax—
Catacola, 5 bgs.
Leghorn, 126
Odessa, 50 pks.
Rouen, 10 cs.
Salonica, 10

Phosphate—
Alexandria, 6 t. £12

Phosphorus—
Demerara, 1 cs. £9
Kobe, 1 t. 5 c. 200

Phosphoric Acid—
Maranham, 1 t 8 c. 2 q. £21

Pitch—
Bilbao, 40 cks.

Potash—
Alexandria, 5 c. 2 q. £5
B. Ayres, 1 t. 12 4 37

Potassium Bicarbonate—
New York, 1 t. 3 c. 3 q. £31

Potassium Chlorate—
Calcutta, 1 t. 12 c. 2 q. £53
Gothenburg, 15 492
Hamburg, 5 150
Hiogo, 11 330
Vera Cruz, 1 10 45

Potassium Prussiate—
Calcutta, 8 c. 1 q. £25
Genoa, 2 t. 9 145

Salammoniac—
Alexandretta, 1 t. £33
Bombay, 1 c. 2
Constantinople, 3 10 108
Philadelphia, 5 3 1 q. 171
Smyrna, 1 33

Salt—
Accra, 25 t. 15 c.
Alexandria, 3 cks.
Amherst, 16 t.
Antwerp, 50
Athens, 10 brls.
Attoaboe, 6 5 c.
Baltimore, 680
Bayin, 12 10
Barbadoes, 25
Bonny, 10
Boston, 150
Brussels, 3 10 c.
B. Ayres, 18
Calcutta, 5,236
Cardenas, 100 sks.
Cayenne, 50 bgs.
Cienfuegos, 400
Conakry, 814 1,244
Demerara, 1,340 brls. 4 pns.
Dubreka, 1,250 bxs.
Frederickton, 192 sks.
Galveston. 300 t.
Gibraltar. 1 15 c.
Gd. Bassa, 250 bgs. 1,296
Gd. Bassam, 1,000
Gd. Lahou, 7 t. 10
Hambro, { 648 bgs. / 50 t.
Havana, { 500 bgs. / 10 t.
Jamaica, 25 100 cs.
Kouillon, 1,000 bgs.
Lagos, 1,250
Lahou, { 25 t. / 500 bgs.
Loango, 320
Melbourne, { 1,817 / 20 t.
Montreal, 1,547 bgs.
N. Orleans, 1,300 t.
Nuevitas, 50
Para, 225
Petitcodiac, —
Pt. Natal, 100
Porto Novo, 25
Punta Arenas, 8 18 c.
Rangoon, 686
Rio G. do Sul, 100 cs.
Rosario, 10
Sagua la Grande, —
St. John's, 100 10
San Francisco, 82 11 c.
Sherbro. 186 12
Sinoe, 15 13
Sierra Leone, 950 7
Sussex, 16
Sydney, 179

Salt Cake—
Antwerp, 120 t. £155
Baltimore, 40 1 c. 65
Bombay, 1 18 5
Delagoa Bay, 11 27
Philadelphia, 25 40
Wellington N.Z., 3 1 7

Saltpetre—
Havana, 10 c. £15
Larnaca, 1 t. 4 3 q. 87
Maceio, 4 18 1 110
Para, 2 10 56
Parnahyba, 5 5
Rio de Janeiro, 10 17

Sheep Dip—
B. Ayres, 13 c. 3 q. £20
Calcutta, 730 dms. 45
Cape Town, 250 31
M. Video, 1 t. 10 3 q. 20
Rangoon, 73 dms. 13

Silicate Soda—
Barcelona, 60 brls.
Vigo, 10

Silver Sulphide—
Hamburg, 1 c. 1 q. £60

Soap—
Accra, 144 bxs. 2 cs.
Akassa, 72 dms
Algoa Bay, 1,545 39 30 bdls.
Antwerp, 100
Axim, 420
Barbadoes, 1,200
Batanga, 50
Belize, 502
Boma, 209
Bombay, 570 11
Brussels, 25
Cairo, 46
Calcutta, 27 145
Cameroons, 250
Canaria, 675
Cape Town, 2,129 30
Carbarien, 25
Clarence, 63
Constantinople, 204 2
Curacao, 171
Delagoa Bay, 700 4
Demerara, 1,700
Dixcove, 50
E. London, 1,450 1
Galata, 20
Genoa, 100
Gibraltar, 25
Grenada 125
Greytown, 1,470
Hong Kong, 80 bgs.
Havana, 301
Havre, 23 bxs.
Iquique, 1
Johannesburg, 600 40 10
Kimberley, 25
Kingston, 2
Lagos, 400
Landana, 100
Las Palmas, 150
Leghorn, 25
Limon, 50
Manaos, 1,000
Matida, 130
Montego Bay, 100
Melbourne, 3
Montreal, 10 brls.
N'Gove, 10
Para, 300 200
Pt. Elizabeth, 520
Portland 120 cs.
Pt. Natal, 300 30
Pretoria, 790 15
Principulca, 90
Rangoon, 200 21
Rotterdam, 100 230
Rouen, 10
San Fernando, 300
Sapeli 400
St. John's, 340
St. Lucia, 40
Shanghai, 4,496
Sierra Leone, 314
Singapore, 50
Smyrna, 47
Surinam, 150
Sydney, 6 16 tnks
Tangiers, 40
Teneriffe, 400
Trieste, 1
Victoria, 50

Soda Ash—
Adelaide, 225 cks.
Algoa Bay, 2
Ballarat, 50 brls.
Bombay, 20
Boston, 36
B. Ayres, 25 182
Calcutta, 137
Callao, 60
Ghent. 600 bgs.
Kobe. 117
Libau, 15
Madras, 16
Melbourne, 283
M. Video, 20
New York, 320
Oporto, 14
Rio de Janeiro, 25
Smyrna. 80
Townsville, 19
Venice, 100

Soda Crystals—
Bombay, 500 kgs.
Boston, 56 brls.
New York, 140 cks.
Rangoon, 20

Sodium (Metal)—
Hamburg, 2 t. 10 c. £30:

Sodium Bicarbonate—
Adelaide, { 70 bgs. / 400 kgs.
Alexandretta, 10
Alexandria, 56 brls.
Antwerp, { 30 bgs. / 35 kgs. 26 cks.
Bombay, 270 5
B. Ayres, 100 45
Gibraltar, 20 8
Hiogo, 500
Johannesburg, 24
Kurrachee, 650
Lisbon, 20
Madras, 330
Melbourne, 884
M. Video, 50
Rangoon, 50
Rouen, 20 10
San Juan, 20
Townsville, 600
Valencia, 75

Sodium Hyposulphite—
Callao, 170 kgs. 50 brls.

Sodium Oxide—
Leghorn, 5 cs.

Starch—
Pernambuco, 41 bgs.

Stearine—
Marseilles, 120 brls.

Sulphur—
Boston, 25 t. 1 c. £107
Gothenburg, 50 2 213
Maceio, 19 2 q. 7
Mulos Quay, 451 14 1,845

Superphosphates—
Malaga, 30 t. £85
Teneriffe, 13 6 c. 45

Tan Extract—
Boston, 10 cks.

Tartaric Acid and Citric Acid—
Bombay, 1 c. 2 . £15

Ultramarine—
Copenhagen, 8 brls.

New York, 4 cs. 10 brls.
Sydney, 5
Varnish—
Alexandria, 3 brls. 2 cs.
Antwerp, 6 cks.
Calcutta, 3
Hong Kong, 12
Mayaquez, 1
Rio de Janeiro, 2
Rosario, 6
Shanghai, 10 dms.
Volo, 1
White Lead—
Bahia, 50 kgs.
N. Orleans, 18 4 cs.
Zinc Chloride—
Bombay, 27 t. 15 c. £345
Riga, 1 7 99

MANCHESTER.

Week ending February 1st.

Alkali—
Germany, 20 cks.
Bleaching Powder—
Sherbrooke, 50 cks.
Carbolic Acid—
Germany, 25 cks.
Chemicals (*otherwise undescribed*)
Mainz, 5 kgs. 9 cs.
Coal Products—
Aniline Oil
Belgium, 5 dms.
Germany, 10
Glue—
Germany, 10 cks.
Holland, 16
Glycerine—
Germany, 25 cs. 9 crbys.
Grease—
Germany, 2 dms.
Naphthylamine—
Germany, 29 cks.
Paint—
Bombay, 1 ck. 2 cs. 2 dms.
Paraffin Wax—
Holland 1 cs.
Pitch—
Cette, 338 t.
Belgium, 221 13 c.
Soap—
Montreal, 1 cs.
Soda Crystals—
Bombay, 152 bgs.
Sodium Naphthionate—
Germany. 26 cks.
Tar Oil—
Belgium, 10 brls.
Germany, 4
White Lead—
B. Ayres, 20 kgs.
Waste Salt—
St. John's, 400 t.

HULL.

Week ending January 28th.

Alkali—
Riga, 100 cks.
Venice, 37
Ammonium Sulphate—
Antwerp, 549 bgs
Genoa, 1,000
Ghent, 200
Leghorn, 152
Venice, 200
Bleaching Powder—
Hango, 33 cks.
Caustic Soda—
Genoa, 65 dms.
Chemicals (*otherwise undescribed*)
Amsterdam, 145 cks. 12 btls.
Antwerp, 26 cs.
Bergen, 1
Bombay, 60 750 brls. 7 cs.
Christiania. 8 378 slbs.
Copenhagen, 4 5 91 pks.
Genoa, 102 23
Gothenburg, 34
Hamburg, 25 95
Hango, 1
Naples, 20
New York. 24
Odessa, 177 brls. 100 btls.
Reval, 1 cs.
Rotterdam, 40
Stockholm, 3
Trieste, 14
Cottonseed Oil—
Amsterdam, 10 t. 2 c.
Antwerp, 24 18
Copenhagen, 10
Dunkirk, 75 1
Gothenburg, 9 9
Hamburg, 12 16
Konigsberg, 10
Marseilles, 18 19
Rotterdam, 66 6
Stavanger, 14
Trieste, 30 10
Creosote—
Hamburg, 10 cks.
Dyestuffs (*otherwise undescribed*)
Reval, 1 cs.
Stettin, 60 bgs.
Glue—
Amsterdam, 10 bgs.
Linseed Oil—
Bombay, 28 t. 19 c.
Christiania, 10 5
Hamburg, 7
Karachi, 5
Rotterdam, 5 1
Stavanger, 2 6
Trieste, 1 5
Venice, 11
Manure—
Genoa, 203 t.
Naphtha—
Marseilles, 30 brls.
Paint—
Bombay, 224 cks.
Painters' Colours—
Amsterdam, 4 cs.
Antwerp, 38 cks. 6 dms. 82
Bari, 4
Bombay. 285 249
Constantinople, 2 pks.
Drontheim, 1
Dunkirk, 10
Genoa, 24 dms.
Ghent. 8 76
Hamburg, 6 4
Karachi, 4
Marseilles, 6
New York, 205 100 brls.
Odessa, 34 25 pks.
Rotterdam, 20 1 cs.
Stettin, 5 75
Trieste, 31
Phosphate Powder—
Venice, 421 t.
Pitch—
Antwerp, 275 t.
Dunkirk, 220
Sheep Dip—
Bombay, 5 cks. 401 dms.
Slag Meal—
Gothenburg, 1,016 bgs.
Soap—
Amsterdam, 1 cs.
Bombay, 21
Christiania, 150
Starch—
Odessa, 450 cs.
Superphosphates—
Bombay, 100 bgs.
Tar—
Amsterdam, 16 cks.
Stettin. 10 tins
Varnish—
Antwerp, 24 cks 1 cs.
Bombay, 60 dms
Ghent, 5
Stockholm, 1

GLASGOW.

Week ending February 2nd.

Alizarine Oil—
St. John's, N.B., £24
Alkali—
Amsterdam, 12 c.
Ammonium Carbonate—
Hamburg, 2 c.
Ammonium Sulphate—
Baltimore, 101 t. 19 c
Colombo, 10 13¾
Hamburg, 55 13
New York, 45 14
Penang, 10 7¾
Rotterdam, 50 13
Acetic Acid—
Antwerp, £51
Rotterdam, 36
Borax—
Antwerp, £156 10s.
Rotterdam, 45
Carbolic Acid—
Rotterdam. £197
Caustic Soda—
B. Ayres, 9 t. 2 c. 2 q.
Chemicals (*otherwise undescribed*)
Amsterdam, £1 10s.
Coal Tar—
Bombay, £1 c 9
Calcutta, £268 18s.
Madras, £99
Creosote Oil—
Bordeaux, £450
Iodine—
Rotterdam, 1 ck.
Linseed Oil—
Mollendo, 3 t. 6 c.
Magnesia—
Hamburg, £9
Mineral Oil—
B. Ayres, £45
Rangoon, 54
Naphtha—
Amsterdam, £1
Nitric Acid—
Madras, £75
Paint—
Colombo, £102
Painters' Colours—
Algoa Bay, £25
Iquique, £63 10s.
Mollendo, 51 19
Paraffin Wax—
Amsterdam. £30
Pt. Elizabeth, 35
Pitch—
Bombay, £133 13s.
Potassium Bicarbonate—
Amsterdam, £237
Brussels, 113
Madras, 69
St. John's, N.B., 118
Potassium Chlorate—
Amsterdam, £5
Potassium Cyanide—
Valparaiso, £230
Quebracho Extract—
Belgium, £58
Sheep Dip—
Punta Arenas, £260
Superphosphates—
Jersey, 206 t. 11½ c.
Tar Oil—
Hamburg, 3 t. 2 c.

TYNE.

Week ending January 28th.

Alkali—
Amsterdam, 28 t. 12 c.
Christiania, 1 13
Ammonia—
Seville, 4 c.
Ammonium Carbonate—
Barcelona, 3 t. 2 c.
Antimony—
New York, 45 t.
Rotterdam, 1
Arsenic—
Venice, 1 t.
Barium Binoxide—
Antwerp. 10 t. 14 c.
Barium Carbonate—
New York, t.
Bleaching Powder—
Amsterdam, 22 t. 19 c.
Antwerp, 28 3
Copenhagen, 6 8
Drontheim, 11 16
Gothenburg, 5 2
Hamburg, 5 14
Horsens, 2 14
New York, 10 3
Rotterdam, 2 6
Caustic Soda—
Amsterdam, 23 t. 4 c
Antwerp, 16 2
Barcelona, 40 6
Christiania, 1 9
Copenhagen, 1 10
Gothenburg, 20
Odense, 1 3
Fluor Spar—
New York, 117 t. 15 c.
Hydrochloric Acid—
Seville, 2 c.
Litharge—
Amsterdam, 17 c.
Christiania, 76
Magnesia—
Amsterdam, 3 t. 6 c.
Barcelona, 10 6
Genoa, 3
Hamburg, 19
Manure—
Guernsey, 26 t.
Jersey, 173 19 c.
Nitric Acid—
Seville, 4 c.
Paint—
Antwerp, 1 t. 1 c.
Bergen, 11
Hamburg, 1
Rotterdam, 1
Stavanger, 1 7
Painters' Colours—
Antwerp, 5 cks.
Rotterdam. 5 dms.
Satin White—
Hamburg, 1 t. 2 c.
Slag—
Rotterdam, 208 t.
Soda—
Amsterdam, 17 t. 15 c.
Christiania, 10 6
Copenhagen, 2 2
Genoa, 8
Gothenburg, 5 18
Soda Ash—
Amsterdam, 5 t. 10 c.
Bergen, 10
Gothenburg. 5 5
New York, 16 5
Sulphur—
Christiania, 10 t.
Superphosphates—
Genoa, 150 t. 1 c.
White Lead—
Copenhagen, 15 c.

GOOLE.

Week ending January 25th.

Chemicals (*otherwise undescribed*)
Hamburg, 2 cs.
Coal Products (*otherwise undes.*)—
Boulogne, 18 cks. 7 cs.
Ghent, 1 1
Rotterdam, 7 2
Dyestuffs (*otherwise undescribed*)
Hamburg, 1 ck. 1 cs.
Rotterdam, 44
Glue—
Boulogne, 50 bgs.
Logwood—
Antwerp, 10 t.
Hamburg, 20
Manure—
Dunkirk, 383 bgs.
Ghent, 282
Painters' Colours—
Rotterdam, 1 ck. 8 cs.
Pitch—
Antwerp, 631 t.
Dunkirk, 231

GRIMSBY.

Week ending January 28th.

Alkali—
Dieppe, 1 ck.
Rotterdam, 5 cs.
Caoutchouc—
Gothenburg, 1 blk.
Helsingborg, 74 cs.
Chemicals (*otherwise undescribed*)
Dieppe, 10 cs.
Malmo, 1 ck.
Coal Products (*otherwise undes.*)—
Dieppe, 33 cks. 5 pks.
Hamburg, 1 cs. 16 btls.
Painters' Colours—
Antwerp, 1 kg. 4 cks. 1 cs.
Dieppe, 1 1 brl
Hamburg, 2 1
Rotterdam, 1

PRICES CURRENT.

WEDNESDAY, Feb. 8, 1899.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9	&	8/3
,, Glacial .. .. ,,		35/-	
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric.. .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	9
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	0	11½
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	0
Arsenic, white powdered .. .. nett per ton	16	15	0
Alum, loose lump .. .. ,,	4	5	0
Alumina Sulphate (pure) .. .. ,,	3	15	0
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880 = 28° B.. .. .. ,,	0	0	2¾
,, = 24° B.. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate.. .. .. per ton	19	0	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	10	5	0
,, ,, (grey) Hull .. .. ,,	10	3	9
Aniline Oil (pure) .. .. per lb.	0	0	4¾
Aniline Salt ,, ... ,,	0	0	4¼
Antimony .. .. per ton	37	15	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide).. .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	4	10	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	5	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk.. .. .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizatine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's.. .. ..per gallon	0	0	8
,, 50/90 ,, ... ,,	0	0	8
Carbolic Acid (crude 60°).. .. .. ,,	0	1	11½
,, (crystallised 40°) .. .. .. per lb.	0	0	6¾
,, (liquid 95/97%) .. .. ..per gallon	0	1	0
Creosote (ordinary) .. .. ,,	0	0	3
,, (filtered for Lucigen light) .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	2	6
Solvent Naphtha, 90% at 160° .. ..per gallon	0	1	2
Copper .. .. per ton	71	15	0
,, Sulphate .. .. ,,	23	10	0
,, Oxide (copper scales) .. .. ,,	52	0	0
Glycerine (crude) 80% .. .. ,,	24	0	0
,, (distilled S.G. 1250°) .. .. ,,	48	10	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	2	6
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	16	10	0
,, Litharge Flake (ex ship) .. .. ,,	17	0	0
,, Acetate (white ,,) .. .. ,,	25	10	0
,, ,, (brown ,,) .. .. ,,	18	0	0
,, Carbonate (white lead) pure .. .. .. ,,	18	10	0
,, Nitrate .. .. ,,	21	0	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	7	6
,, ,, (grey) (ex ship) .. .. ,,	7	17	6
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton	9	10	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	15	10	0
,, Borate .. .. per cwt.	2	0	0
,, Ore, 70% .. .. per ton	3	10	0
Methylated Spirit, 61° O.P .. .. per gallon	0	2	0
Naphtha (Wood), Solvent .. .. ,,	0	3	0
,, ,, Miscible, 60° O.P. .. .. .. ,,	0	3	10
Oils:—			
Cotton-seed .. .. per ton	15	15	0
Linseed .. .. ,,	18	15	0
Stearine .. .. ,,	26	0	0
Phosphorus (Yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	0	0
,, Chlorate .. .. per lb.	0	0	3¼
,, Cyanide, 98 % .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) 90 %.. .. per ton	22	0	0
,, ,, ,, 75/80 % .. ,,	17	15	0
,, Potash Hydrate Liquid 50 % .. .. ,,	10	10	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	2	12	6
,, Prussiate Yellow .. .. per lb.	0	0	7½
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	0
,, Muriate, 80 % ,, ... ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3⅜
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % ..nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	5	0
,, ,, (Carb. Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Soda Crystals) .. .. .. ,, ,, (f.o.r. w'ks.)	2	10	0
,, Acetate (ex-ship) .. .. ,,	12	10	0
,, Arseniate, 45 % .. .. ,,	13	0	0
,, Chlorate .. .. per lb.	0	0	3¾
,, Borate (Borax).. .. .. nett per ton	16	0	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton (10 ton lots)	7	12	6
,, ,, (74 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,, (10 ton lots)	6	17	6
,, ,, (60 % Caustic Soda) .. ,, ,, (10 ton lots)	5	17	6
,, ,, (pure liquor 90° Tw.) .. ,, ,, (10 ton lots)	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate (cwt. kegs) .. .. ,,	6	15	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25 % .. .. ,,	16	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	6
,, Nitrite, 98 % .. .. per ton	25	0	0
,, Phosphate.. .. .. ,,	10	7	6
,, Prussiate .. .. per lb.	0	0	5⅜
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	10	0
,, Stannate, 40 %.. .. .. per cwt.	3	10	0
,, Sulphate (Salt-cake) .. .. per ton	1	10	0
,, ,, (Glauber's Salts .. .. .. ,,	1	10	0
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	4	15	0
Strontium Hydrate, 100 % .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. .. per lb.	0	0	5¾
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton	7	0	0
,, (Roll Brimstone) .. .. ,,	6	0	0
,, Brimstone: Best quality.. .. .. .. ,,	4	12	6
Superphosphate of Lime (26 %) .. .. ,,	2	10	0
Tallow .. .. ,,	24	0	0
Tin Crystals .. .. per lb.	0	0	7
,, English Ingots.. .. .. per ton	113	0	0
Zinc (Spelter) .. .. ,,	27	5	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	7	5	0
,, Sulphate, Crystal .. .. ,,	6	15	0

THE

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AND

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Trade Advertisements, Announcements in the Directory Columns, and all Advertisements not prepaid, are charged at the Tariff Rates, which will be forwarded on application.

Advertisements intended for insertion in the current week's issue should reach the office by **Thursday morning** at the latest.

CURRENT TOPICS.

RIVER POLLUTERS AND POLLUTION.

JUST recently two events have occurred which have helped to illuminate the relative positions of those who seek to suppress river pollution and those who provoke the suppression.

A deputation recently waited upon the Thames Conservators to plead for a "lenient and broad-spirited" exercise of their very wide powers; while on Tuesday a conference on river pollution, convened by the Sanitary Institute, pledged itself to a policy of "full and comprehensive reform."

One or two interesting points of procedure were raised by the deputation which waited upon the Thames Conservators. The main object of the deputation was to suggest that the requirements of the Conservators might be met by instructions to their inspectors to take their samples only at the outfall of the brooks and minor tributaries into the larger streams or main river. They also thought that the District Councils should have notice sent to them of the time and place where such samples would be taken in order that they might secure a comparative analysis.

It was pointed out that some of the samples secured by the inspectors of the Conservancy Board were taken at such a a distance from the river and tributaries that they afforded no true test of what was likely, in any circumstances, even during the time of flood, to reach the river. The question was also raised whether the expense which might be inflicted on one of the smaller parishes in providing a drainage scheme was not out of all proportion to any possible good that could result from it to the Thames. It was open to question whether the creation of a number of sewage farms in the Thames district would increase the purity of the river.

Of course, it does not follow that every purifying plant must be a sewage farm, and as the Conservators do not insist on any particular system being adopted, the local authorities coming under the Conservancy Act of 1894 are better off than those who are at the tender mercy of the Local Government Board. The authorities *must* take steps to effect an improvement wherever the Conservators think fit, but they can please themselves how they proceed. This is very different to the methods of the L.G.B. With them it is not sufficient if you remove an obstruction from your front door, but they go further and insist upon you buying a horse and lurry to cart it away with.

In the matter of taking samples, it was pointed out that the Board had no option but to see that samples were taken at the proper places, according to the Act. They were always quite willing to let Councils know where and when samples would be taken by their inspectors, though of course this notice could not be so previous as to give them three or four days in which to alter existing facts, or do anything to purify the water. We commend these points to the consideration of river authorities, and to the gentlemen who at the Sanitary Institute Conference were so anxious to adopt sweeping reso-

lutions. The prospect will not be very enlivening if even the two following proposals are acted upon, for in the first place the Conference decided that the officers of local sanitary authorities and county councils should conduct regular inspections and examinations of water, and for this purpose should have free access to any land and premises from or through which water is supplied for domestic purposes. For the second tit-bit we have the two suggestions that special water authorities should be appointed for each group of gathering grounds in the kingdom, in addition to, but not superseding, the officials of the several councils, and that wilful or negligent pollution of any water supply should be treated as a penal offence. It is stated generally that trade is reviving. It need do.

THE "BRITISH ANALYTICAL CONTROL" AUTHORITY.

The latest perversion of analytical chemistry to the ends of the "boomer" seems to have taken the shape of a wonderful authority bearing the burden of the above mysterious title. The objects, which are threefold, look very nice on paper. They are as follows: "1. To protect the health and interests of the public by affording an authoritative and permanent guarantee that the nature, substance, and quality of food and other products are in accordance with the demand and expectation of the purchaser, and by directing attention to these products, which, being under permanent analytical control, may be accepted as free from injurious or doubtful constituents, and as pure, genuine, and good in the strictest sense of these terms. 2. To protect manufacturers and importers against the unfair competition arising from the introduction and sale of imitation and of inferior or adulterated articles. 3. To enable private purchasers and consumers of controlled articles to satisfy themselves, independently and without expense, as to the character and quality of any samples of such articles offered for sale." All we want to know is who is to pay the piper. At present we see very little to guarantee the superiority of goods bearing the stamp of the "British Analytical Control" any more than the quality of patent pills is vouched for by the Inland Revenue stamp on the wrapper. For the rest we think we can safely commend this new authority to the attention of the censors of the Institute of Chemistry. The fulsome analytical puff has been blossoming pretty freely again of late. This latest development may assist in bringing matters to a head.

Society of Chemical Industry: *Liverpool Section.*—The next meeting of the section will be held in chemical laboratories, University College, on Wednesday, February 22nd, 1899, at 7 p.m. Business: 1. Discussion of Messrs. Max Muspratt and Shrapnell Smith's paper on Hypochlorite Solutions (see Journal Soc. Chem. Ind., December, 1898.) 2. The following papers will be read by Mr. J. Kent Smith:—(*a*) A technical method for estimating nitrogen in illuminating and other gases, without the aid of a gas apparatus. (*b*) Imperishable colour standards, and their application to the registration of benzole washing tests.

Electrolytic-Alkali Works for Mid-Cheshire.—Operations have now been commenced for the erection of extensive works at Cledford Bridge, Middlewich, for the manufacture of alkali by an electrolytic process, and already the first consignment of materials for the works has been received at Middlewich. Negotiations for the purchase of suitable land were completed several weeks ago, when the Electrolytic Parent Company Limited, agreed to purchase a number of acres of land at Cledford Bridge, Middlewich, from Mr. Randle Casson and the late Samuel Percival's Trustees, in preference to a site at Wheelock, near Sandbach. The land is in every way adapted for carrying on this new industry, having excellent railway and canal facilities, whilst the boring operations for brine—which is an important factor in the manufacture—were completed some time ago, and proved eminently satisfactory, fully justifying the company in deciding upon the Middlewich site, where an unlimited supply can be obtained free from royalties.

PETROLEUM FLASH-POINT NOTES.

THE Petroleum Bill, introduced by Mr. Harold Reckitt, will contain one clause only, the raising of the flash-point from 73 to 100. It is backed by Viscount Chelsea, Colonel Denny, Mr. John Burns, and the following members of the House of Commons Committee: Messrs. Reckitt, Ure, Tulley, McKillop, and Sir T. Gibson Carmichael. The simplicity of the measure is expected to commend itself to members on both sides. It will not interfere with the Government Bill, which, we hear, will not touch the flash-point.

* * *

The *Times* says: Although the Queen's Speech contained no mention of legislation in regard to petroleum, it is understood that a measure is in preparation at the Home Office for introduction in the House of Commons this session, embodying such of the recommendations of last year's Select Committee as were carried by substantial majorities. In regard to the proposal to raise the flash-point from 73 deg to 100 deg. Fahr., which was agreed to by a bare majority after prolonged discussion, the Government will, we believe, make no attempt to give statutory effect to it; but regulations will probably be submitted for the purpose of preventing the manufacture and sale of unsafe lamps, and also for restricting the storage in undue quantity of petroleum oil. In other words, the Government, while declining to assent to the raising of the flash-point, have satisfied themselves that a case has been made out for applying to petroleum oil certain of the conditions which govern the storage and sale of petroleum spirit.

* * *

The Secretary of the Rural Labourer's League, Birmingham, has taken up the cudgels in behalf of low-flash oil because the safe oil will be dearer. He resents this "tax" being put upon the rural labourer. The rest of his arguments show he does not know the A.B.C. of the question he attacks. Is this another of the wily S.O. agents tricks? It would be irresistibly funny were it not so pitiful to see the sons of the soil made subservient to the ends of the millionaires. If the attack is the product of the Secretary's own personal intellect, we are still sorrier than ever for the rural labourers for whom he labours.

* * *

The Holzapfels Compositions Company (Limited), were summoned last week at the instance of the London County Council, for keeping a quantity of petroleum, to which the Petroleum Acts, 1871 and 1879, applied, without a licence.

Mr. Atherley-Jones said that his clients were manufacturers of a paint which was manufactured at Newcastle-on-Tyne. The drums were hermetically sealed, and were only opened when required to be used on ships and at the place where the work was to be carried out. The composition was simply stored on the premises in question. The paint was not a product of petroleum, but was petroleum added to other substances. The amount of vapour given off from a mixture of that kind was trifling, as the petroleum added was only 15 per cent. or 16 per cent. Every possible care was taken, and there was no danger from the composition. For export and storage on board ship the company invariably supplied a paint of 95 deg. to 100 deg. flash point. The Board of Trade had given special permission for the stowage under deck of the company's paints of the higher flash-point; and owing to the damp climate in England paints mixed with a lighter oil and of lower flash-point had to be used in order to get them to dry quickly.

Dr. F. Clowes, consulting chemist to the County Council, said that his analysis showed about 30 per cent. of light ordinary oil, which flashed at the ordinary point.

Mr. F. W. Walker, the manager of the company's works, said that there was about 30 per cent. of oil in the composition, 20 per cent. of which flashed under 100 deg., and 10 per cent. flashed over 100 deg. In addition to the oil, the residue was pigment, linseed oil and other matter. The prosecution failed.

* * *

The Committee of the Manchester and Salford Sanitary Association, some time ago, strongly urged the importance of raising the flash-point of illuminating oils, and petitioned Parliament to that effect. Now that doubts have been expressed whether any legislation to give effect to the report would be forthcoming, the Association await the proper time to renew agitation on the question.

Free Reference Library: The Patent Collection.—Some months ago the Manchester Public Free Libraries Committee, when considering the pressure on the space of the King-street library caused by the constant growth of contents of that institution, resolved, as a measure of temporary relief, to remove the collection of patent publications, including the British and American Specifications, with their indexes, journals, &c., from the Free Reference Library to the branch library in Deansgate. Suitable bookcases having been prepared, the removal of the books took place on Monday. Those who have occasion to use these books will find the new quarters to afford convenient and readily accessible accommodation for the whole of the volumes.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Lactates from Distillery Waste. E. C. Sage. 2,067. January 30.

Improvements in the Manufacture of Colours and Varnishes. S. Scoto and L. D. A. Casalonga. 2,096. January 30.

Improvements in the Manufacture of Coke. W. F. Richards, C. James, T. P. Sims, and W. Ferrill. 2,116. January 31.

Improvements in Preventing the Creeping of Acids. J. T. Niblett and M. Sutherland. 2,129. January 31.

Improvements in Explosive Compounds. J. O. Gunn. 2,149. January 31.

Improvements in and Apparatus for the Separation of Free Carbon from Tar. F. Lennard. 2,183. January 31.

Improvements in Filters. N. Jacobsohn. 2,296. February 1.

Improvements in the Manufacture of Secondary Batteries. J. G. Hathaway. 2,299. February 1.

New Method of Extracting Naphthalene from Coal Gas. W. Irwin and J. P. Leather. 2,318. February 2.

Improvements in the Production of Ozone. E. Andreoli. 2,349. Feb. 2.

Improvements in the Manufacture of Electrodes and Division Plates for Secondary Batteries. W. M. McDougall. 2,369. February 2.

Improvements in and Relating to the Purification of Sewage or Foul Waters. W. H. Handcock. 2,370. February 2.

Improvements in Sewage Filters. W. M. Ducat. 2,373. February 2.

Improvements in the Manufacture of Pigments. H. B. Woltereck. 2,382. February 2.

Manufacture of Calcium Carbide and Apparatus therefor. R. Warner, J. Wade, and C. T. Fox. 2,497. February 3.

Improvements in the Purification of Coal Gas. A. McDougall. 2,502. February 3.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

An Improved Process of Manufacturing Sulphuric Acid. A. Sebillot, 60, Boulevard de Clichy, Paris. Eng. Pat. 21,616. October 14, 1898.

The object is to produce sulphuric acid direct from sulphide ores. Copper pyrites, for instance, are roasted in a suitable furnace, a special form of which is described in detail, and is suitable for mercuric and other ores. The gases, comprising sulphur dioxide, nitrogen, and some unburnt air, are passed down a reaction chamber, air and steam in the desired proportions being injected during their passage. The reaction chamber contains a number of perforated shelves of ceramic material, on which are layers of coke, pumice stone, or a suitable metallic oxide. Air can also be introduced through special pipes into the spaces between the shelves. The gases pass from the bottom of the first chamber up a second one, packed in a similar manner, and down which water is sprayed, so as to effect the complete condensation of the acid vapours. There are five figures.

Improvements in Apparatus for the Concentration of Sulphuric Acid and other Liquids by Evaporation. O. Guttmann, 12, Mark-lane, London. Eng. Pat. 16,220. July 25, 1898.

The lipped rectifying vessels, which are peculiar to acid concentrating plants of this type, are arranged spirally, one above the other in a circular tower. The tower is built up of four carrying columns to which are hinged doors, forming, when closed, the walls of the tower. These segment-like doors carry on a bracket the rectifying vessels, the bracket or shelf being provided with a rim, which forms a shallow trough, and a pipe which passes to the exterior of the tower. Thus any leakage is rendered apparent at once. The vessels are heated direct by the gases ascending from a furnace at the bottom of the tower, the air supply being heated by passing through the hollow-supporting pillars of the tower. The incoming weak acid is partially heated by following a tortuous passage through a tank on top of the tower before it passes to the first rectifying vessel. There are seven figures.

A Method of and Apparatus for Obtaining Phosphorus from Materials containing it. Electric Reduction Co., Ltd., 22, Austin Friars, London. (Communicated by W. T. Gibbs, Buckingham, Quebec.) Eng. Pat. 5,796. March 9, 1898.

When decomposing a mixture of phosphate of lime and suitable carbonaceous matter by the electric arc, the resulting violent ebullition caused the very finely divided particles to be carried over with the phosphorus vapour, and contaminate the resulting product. To obviate this a furnace is described and illustrated in which graphite rods are heared by an electric current to a very high temperature and the volatilisation of the phosphorus effected by radiated heat.

Improvements in Apparatus for the Production of Carbide of Calcium J. W. Kelly, George House, Gainsboro'-road, Victoria Park, London, and H. Roantree, 6, Stonefield-street, Islington, London. Eng. Pat. 1,819. January 22, 1819.

Instead of acting upon a heap or loose charge of lime and carbon with an electric arc, the arc is maintained between two carbon pencils or electrodes, and a pencil of compressed lime and carbon is introduced into the arc at right angles to it, and steadily fed forward as it fuses away. There are two figures.

Improvements in the Production of Extracts of Tannin. H. H. Lake, 45, Southampton Buildings, London. (Communicated by Lepetit Dollfus and Gansser, Milan, Italy.) Eng. Pat. 2,603. February 1, 1899.

In addition to the bi-sulphites named in Pat. 8,582/96, as suitable for the preparation of soluble extracts of qubracho, hemlock, and pine-wood, the patentee finds that the bisulphites and the like of magnesium calcium, zinc, and alumina—if at all soluble themselves—are also serviceable for such purposes. A part of the bisulphides may also be supplanted by substances giving an alkaline reaction, such as borax, hydrate, phosphate, acetate, sulphide, and bicarbonate of soda. In all these cases it is necessary to heat the mixture.

ELECTRO-CHEMICAL WORK AT NIAGARA.

IN a long and interesting article of the electrical plants at Niagara Falls, the *Electrical World* gives an account of the manufacture of chlorate of potash as there carried on. The power is derived from a large turbine which is rated at 2,500 h.p. at 250 revolutions per minute, under the normal head of 210 ft. This is capable of driving two machines of the size used in connection with it, but at present is coupled to one only. This one machine is a General Electric, 14-pole, direct-current generator, capable of delivering 5,000 amperes at 175 volts. For the rectification of this enormous current, two commutators, one on either end of the armature, are provided, connected with two electrically independent bar windings laid in the same slots. The field is shunt-excited only. The two sets of brushes are connected up in multiple with each other. Proper division of current between the two is ingeniously effected by slightly varying the lead of one or the other set of brushes, a Weston central-zero ammeter connected to a Y-shunt being mounted on the machine, convenient to the brush-rocking wheels, so that this adjustment can be accurately maintained at all times. The generator is controlled on a panel of the switchboard in the gallery overlooking the station, its output being delivered to the plant of the National Electrolytic Company.

The 5,000 amperes are conveyed to the latter company's works with a drop of less than 10 volts over a line between terminals 800ft. long built of aluminium, but unlike that running to the Pittsburg reduction works, which is of aluminium rods about ¼in. in diameter, twisted into great cables. This line is of strips 25ft. in length and with a cross-section 6in. by ½in., four of these, with an aggregate cross-section of 12 sq. in , being on each side of the circuit. The line passes vertically up beside and is supported on the large penstock.

The eight ends of the two adjacent lengths of one polarity are interleaved and lapped upon each other and fastened together by aluminium rivets, as well as by heavy bolts, which also pass through flattened sections of two 1½in. round iron rods, which are each bent into a stirrup shape. These two stirrups rest on the heads of two screw-cap fibre insulators, mounted on pins on an angle-steel framework attached to the penstock. The line was put up last summer, and left with considerable slack, sufficient to allow for thermal contraction without stretching the lengths at the lowest probable temperature.

The plant of the National Electrolytic Company uses 1,100 h.p. continuously, day, night and Sunday, in the electrolytic production of chlorate of potash. This plant is the only one of its kind in the country; in fact, the only one at present producing chlorate of potash in America under any process, although there are other electrolytic plants for the same purpose in Switzerland and Sweden.

The importation of this material during the year 1897 was 6,200,000 lbs., and in 1898, 4,364,000 lbs. Its best known use is in medicine, but it is also used in the manufacture of matches and the dyeing of calico in caps for toy pistols, in fireworks, where it gives a purple flame, and in that most violent of explosives, rack-a-rock. The raw material for chlorate of potash by all methods is chloride of potassium, the source of this raw material for the whole world being in Stassfurt, Saxony. The electrolytic process uses no intermediate reagents, the oxygen necessary for the chlorate being derived directly from water. This direct method gives a product of great purity, a consideration of no small value in medical work. The process used by the National Electrolytic Company is the invention of Mr. W. T. Gibbs, of Buckingham, Quebec, and its operation so far has been successful. The company is about to double its present equipment. The technical details of the process are kept secret.

Reports of Companies.

NEW EXPLOSIVES CO., LTD.

The directors, in their report for the year 1898, state that the net profit for the year is £13,431., as compared with last year, £2,601, which, added to the balance brought forward from 1897, £3,943., leaves the sum of £17,375., and the directors recommend a dividend of 10 per cent. for the year (an interim dividend at the rate of 5 per cent. per annum was paid in July for the half-year ended June 30), transferring to reserve fund £3,000., and carrying forward £5,375. The board has, during 1898, spent in repairs and renewals to plant and machinery, &c., £1,546., as against £811. in 1897, and in new buildings and plant £1,210., as against £316. in 1897. It will therefore be seen that the upkeep and working of the factory has not been neglected. A considerable further expenditure will, however, have to be made at once in order to increase the efficiency of the guncotton factory to meet the present and anticipated future requirements of the trade. Out of revenue the board has written off the amounts expended to December 31, 1898, on the purchase of patents, and the conduct of experiments, together £832., as also off property purchase account, for depreciation of property, plant, and machinery, etc., £2,308. Profit and loss account has also been debited with the debenture interest for the year, £1,595., as well as with the sum of £187. depreciation in the value of the company's investments. The cost of the new factory has exceeded the amount furnished by the issue of debentures by £5,158. The directors are sorry that the debenture capital of the company is too small to permit of a Stock Exchange quotation being granted, but it is proposed to redeem the debentures, and free the company from their liability as quickly as the profits will permit. The period under review is the best that the company has experienced for many years past, and 1899 has opened with a large amount of work in hand.

INDIARUBBER, GUTTAPERCHA, AND TELEGRAPH WORKS, LTD.

The directors report for the year ended December 31st last states that the accounts show, after provision for doubtful debts, a net profit for the past year of £62,222. Adding £13,173. brought forward and deducting £12,500. interim dividend paid in July, there remains a disposable balance of £62,895. The directors recommend the distribution of a dividend of 15s. a share, free of income-tax, amounting to £37,500., making, with the interim dividend paid in July, a total payment of 10 per cent. for the year, and leaving £25,395. to be carried forward. The general business has been more profitable during the past year than in 1897, the selling prices of goods having been advanced to meet the increase in the cost of the raw materials. The cable vessels have been moderately employed. The high efficiency of the Silvertown and Persian factories has been maintained by constant renewals and by the replacing of plant and machinery where improved methods of manufacture have so required. The employment of electricity for the transmission of power is being extended at the works. The Melbourne agency has been reinstated in its original quarters, the burnt-out block having been reconstructed.

HERMAND OIL CO., LTD.

A report with a scheme for the reconstruction of the Hermand Oil Company is being issued by the directors to the shareholders. The share capital of the present company in issue consists of 272,721 shares of £1. each, fully paid up. The directors propose that the new company be incorporated with a share capital of 70,000 shares of £1. each, and that each member of the present company shall be entitled to claim for each five shares of the present company held by him one share of the new company credited with 16s. 8d. paid up, and with a call liability of 3s. 4d. per share. The call liability would amount to £7,090. The directors, however, propose only to call up a small portion of the amount to enable them to restart the works.

WIGAN COAL AND IRON CO., LTD.

The annual report of the Wigan Coal and Iron Company states that the output and sales have both increased. The accounts for the year ending December 31st last show a profit of £102,324. 5s. on the whole operations of the company. The sum of £17,271. 17s. 7d. was brought forward, making together £119,596. 2s. 7d. The directors recommend a dividend at the rate of £5. 10s. per cent. per annum, free of income-tax, for the year, which will require £99,534. 17s. 6d. An instalment at the rate of £4. per cent. per annum was paid in August, absorbing £36,194. 10s. leaving £63,340. 7s. 6d. to be required for the present dividend. After providing for the £15,000. for further developments, the sum of £5,061. 5s. 1d. remains to be carried forward.

Parliamentary Jottings.

THE IMPROVEMENT OF CONSULAR REPORTS.

In the House of Commons last week,

Mr. Marks asked the Under-Secretary of State for Foreign Affairs whether consular reports could be made more useful to the manufacturers, merchants, writers for the press, and the other persons for whom they were prepared, by the practice of greater celerity in their compilation and publication and by organisation of the contents of the reports, so that the most important statistics and items of information relating to industry and commerce might be co-ordinated in the various reports; whether, to achieve these purposes, the Foreign Office would furnish consuls with model or skeleton reports, accompanied by instructions, by which means the desired uniformity and completeness might be attained; and whether, in framing the model, the Foreign Office would be guided in a measure by the excellent reports and system of rapid publication which characterised the Consular Service of the United States.

Mr. Brodrick said that the utmost pains were taken to secure the earliest practicable publication of these reports, and the average time occupied between their receipt and issue was under a month. In this respect the British reports compared very favourably with those of the United States. A paper comparing the reports of the two countries with regard to rapidity of issue, completeness of indexes, and quantity and quality of information would be found as Appendix 14 to the Report of the Commercial Intelligence Committee which was laid on the table of the House last session. The Commercial Intelligence Bureau, which it was contemplated to create as the result of the recommendations of the Committee referred to, would, he trusted, secure the marshalling of the facts in the manner desired by his hon. friend. As regarded the form of the reports and the directions as to their compilation, very full and complete instructions, accompanied by skeleton tables and returns, had for some time past been in the hands of Her Majesty's Consuls. These instructions were revised and supplemented from time to time as occasion required.

NEW BILLS.

Among new Bills brought in and read for the first time were the following:—

Sir F. Powell,—Bill to make more effectual provision for Prevention of Pollution of Rivers and Streams

Mr. Wilson-Todd,—Bill to make more effectual provision for Prevention of the Pollution of Rivers and Streams.

Mr. Reckitt,—Bill to amend the Petroleum Act, 1879.

THE PATENT LAW.

On Wednesday Mr. Cawley asked the President of the Board of Trade whether a patent expiring in any one of the following three countries, viz, France, Germany, and the United States, must simultaneously expire in the other two countries, whilst in the United Kingdom the same patent might afterwards run on to the end of its terms, notwithstanding that it had ceased to exist in those countries.

Mr. Ritchie: No, sir. I think the hon. member's question is founded upon some misapprehension of the existing position of this subject. In the United Kingdom the duration of a patent is not affected by the expiry of a patent for the same invention in any other State. There appears, however, to be no difference in this respect between the law in this country and the laws which have been in force in Germany for many years past, and in the United States since the 1st January, 1898. According to the old French law the duration of a patent in France could not exceed that of a patent for the same invention obtained abroad, but by the protocol of the International Convention signed at Brussels in December, 1897, the several States of the Union, including France, agreed that patents in those States should be independent of the patents for the same invention obtained in other States.

American Phosphate Industry in 1898.—The article which appeared in the *Journal*, No. 610, bearing the above title, was condensed from the "Engineering and Mining Journal" of New York. We shall be obliged if correspondents desiring more detailed information will communicate direct with our contemporary.

The Affairs of Messrs. James Samuelson and Sons, Limited.—Considerable sensation was caused on the Liverpool Exchange on Saturday last by the receipt by those interested of the following circular:—"24, North John-street, Liverpool, February 10, 1899.—Dear Sir,—In consequence of unexpected losses, the books and accounts of Messrs. James Samuelson and Sons, Limited, have been placed in our hands with a view to the preparation of a statement of affairs.—Yours truly, Harmood Banner and Son." The company referred to have for many years past carried on the business of seed crushers and oil cake manufacturers at the Wallasey Oil and Cake Mills, Birkenhead. A meeting was held on Wednesday.

THE WILCOX WING PUMP.

THERE are many positions in which a pump actuated by an oscillatory movement is preferable to a rotary pump, and in this particular the Wilcox pump excels. At the same time it offers several other advantages, as will be gathered from the following brief description :—

The pump consists of a perfectly cylindrical casing, in which a strong brass wing, provided with valves, oscillates (as shown in Fig. 2). The

Fig. 1.

casing s closed by a lid, which is fastened by 4, 6, or 8 bolts, according to the size of the pump, and which, when necessary, can be easily removed without the pump having to be taken to pieces. On the outside the spindle is furnished with a lever which can be operated either by hand or by power. The sizes 9, 10, and 11, when to be worked by hand, are provided with double levers. The wing only turning half way, and the spindle being well guided, the wear and tear of these pumps is reduced to a minimum.

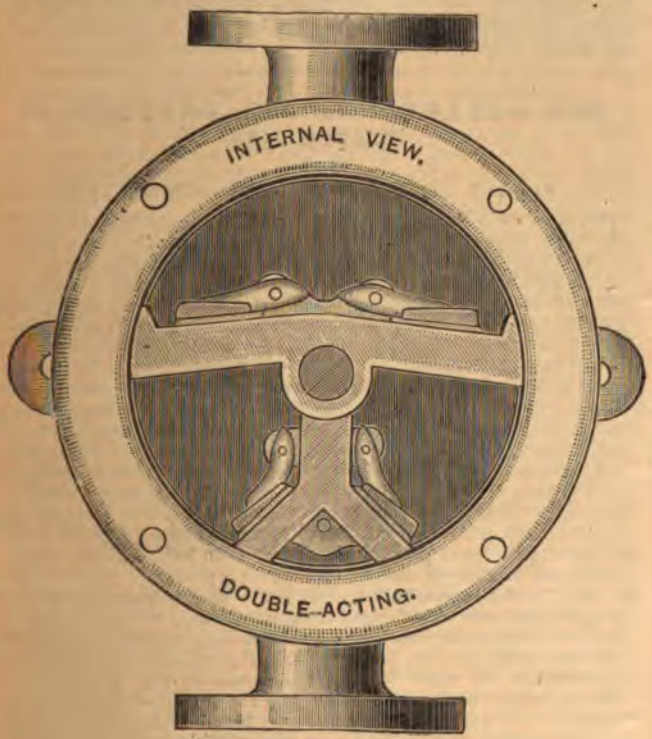

Fig. 2

The pump acts both as a lift and as a force pump, and with the use of a foot valve it sucks up to a height of 25 feet; the height of forcing may reach 110 feet. If a pump is fixed in a well or has a greater length of suction than four feet, a combined holding-up valve and suction rose is necessary.

On account of their simple construction and the high duty they perform these pumps have rapidly gained favour. No pains have been spared to bring them up to perfection in order to be suitable for all demands.

About 2,000 pumps of all sizes in brass and iron are kept in stock by the makers, Messrs. W. H. Wilcox and Co, Ltd., 23, Southwark-street, London, S.E., who issue a useful table of sizes and prices, in which all capacities stated are to be understood as made with a full stroke, with 3 ft. suction and 3 ft. forcing height.

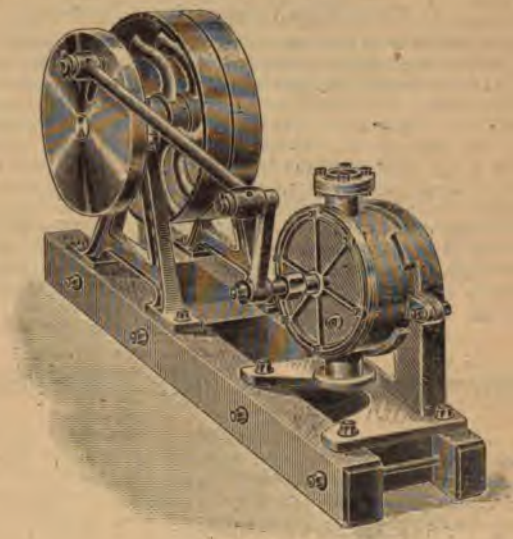

Fig. 3.

These wing pumps are made of iron with brass wings, or entirely of brass or iron, in 13 different sizes, for which the capacities and prices can be had on application to the makers. To prevent bursting or bulging in frosty weather it is necessary to see that the small plug in the face plate is removed and the pump emptied by a few strokes of the lever.

These pumps are also made with a quadruple as well as a double action, whereby the capacity is much increased.

The applications of these pumps are too numerous to be mentioned in detail, but the uses illustrated in Figs. 1 and 3 give an idea of their peculiar applicability to the requirements of chemical works The style depicted in Fig. 3 is especially suitable for collieries, either the double-acting or quadruple-acting pumps being supplied.

GOLD OUTPUT IN THE RAND.

THE output from the Witwatersrand district during the past month (in bullion ounces), as cabled by the Chamber of Mines of the South African Republic, amounts to 410,145 oz., as against 419,504 oz. for December, and 313,826 oz. for the corresponding month of 1898. From the outside districts 20,865 oz. are reported, as against 21,170 oz. for December. The total returns, therefore, made to the Chamber amount to 431,010 oz., as compared with 440,674 oz for the previous month, a decrease of 9,664 oz. The following are the monthly returns from the Rand district alone since the beginning of 1895 :—

	1895.	1896.	1897.	1898.	1899.
	oz.	oz.	oz.	oz.	oz
January	177,463	148,178	209,832	313,826	410,145
February	169,295	167,018	211,000	297,975	—
March	184,945	173,952	232,067	325,907	—
April	186,323	176,707	235,698	335,125	—
May	194,580	195,008	248,305	344,160	—
June	200,941	193,640	251,529	344,670	—
July	199,453	203,873	242,479	359,343	—
August	203,573	213,418	259,603	376,911	—
September	194,764	202,561	262,150	384,080	—
October	192,652	199,889	274,175	400,791	—
November	195,218	201,113	297,124	393,310	—
December	178,428	206,517	310,712	419,504	—
Total	2,277,635	2,281,874	3,034,674	4,295,602	410,145

Explosion at a Phosphorus Works.—On Monday an explosion occurred at the Oldbury phosphorus works, belonging to Messrs. Albright and Wilson, resulting in the death of one workman and serious injury to three others. The men were engaged with one of the boilers when a steampipe burst. Eli Guest, of Longley, was scalded to death.

Correspondence.

*** We do not hold ourselves responsible for the opinions expressed by our correspondents.*

LITHO VARNISH.

(To the Editor of the Chemical Trade Journal.)

Sir,—Could you or any of your subscribers give me, through your valuable journal, a receipt for a good litho varnish, thin and strong? Also how I could convert thin into strong? Your favour will greatly oblige.

Yours, etc,
Alpha Carbon.

SUPERPHOSPHATE TABLES.

(To the Editor of the Chemical Trade Journal.)

Sir,—Replying to the letter of "Manufacturer," I may say that the figures to which he takes exception are, to my own knowledge, adopted by half-a-dozen fairly important works. I have used them for some years, closely approaching experiment. The figures are supported by at least one text book.

I am, &c.,
The Writer of the Article.

REPORT OF THE PURE BEER COMMITTEE.

THE majority report of this Committee is essentially negative in tone, and states that the weight of evidence is to the effect that the disuse of malt adjuncts would not increase the demand for British barley; though, even if it did, they would hesitate to recommend any interference with the natural development of a great industry merely in order to benefit another special class of producers, however important. The Committee reject the suggestion that beer brewed by the use of malt adjuncts or substitutes should be specially labelled, or that individual brewers should be compelled to publish a return showing the amount or proportion of materials of each class used, as they consider the former impracticable, and the latter an interference with business of an almost unique and rather invidious kind; and they submit that, if there were a large and genuine demand for all-malt beer, it would probably seldom be difficult for consumers to obtain it under guarantee. As to hop substitutes, they are satisfied that none which are deleterious are employed, and that in any case the quantity used is, and is likely to be, so small that the matter, whether from the consumers' or the hop-growers' point of view, is hardly worth the attention of the Legislature. They consider that the importance of soundness in beer, from the health point of view, is so great that it would be most unwise to prohibit or discourage the use of preservative adjuncts; and they are prepared, if it should be established that any particular preservatives are objectionable, to trust to the vigilance of the Inland Revenue authorities, who have full power to prohibit the use of "noxious or detrimental" materials.

Mr. Reade, in his minority report, suggests that separate columns for hops and hop substitutes should be inserted in the brewing-books, and the information furnished in the Parliamentary returns; but he considers that the use of such substitutes, if not prohibited, should, as recommended by the Hop Industries Committee of the House of Commons, be accompanied by a declaration. In summing up the whole matter, he declares that the evidence conclusively proves, in his opinion:—"(1) That a beer brewed with substitutes cannot have the same composition as an article produced from malt and hops only; (2) that the use of substitutes, especially sugar, undoubtedly entails the introduction of substances foreign to normal beer, and often in very appreciable quantities; (3) that these substitutes may in some instances be injurious to health, and are certainly less nutritious and wholesome; (4) that beer made from malt and hops only is brewed by nearly half of the brewers in the United Kingdom (including such well-known firms as Guinness, Bass, Henry Lovibond and Son, &c.,), and that, therefore, it is possible to produce the article desired by the consumer without the use of sugar or any other substitutes; (5) that the use of preservatives may be, and probably is in many cases, much abused; (6) that at present the public have no adequate protection against the use of deleterious substances in the manufacture of beer; and (7) that it would be neither difficult nor vexatious to enforce such legislation as would ensure to the purchaser his right, when he asks for beer the national beverage—to obtain a beer brewed entirely from malt and hops."

Closing of Tinplate Works.—Messrs. Richard Thomas and Co., the Gloucestershire tinplate makers, have notified their intention to close their Lydbrook Works, owing, it is stated, to the dearness of coal and tin and the cheapness of the manufactured article. Tinplate making, therefore, will now be carried on in Lydney alone.

A NEW ELECTRIC LAMP.

A THORIUM OXIDE FILAMENT.

AT a meeting of the Society of Arts last week, when the chair was taken by Mr. Alexander Siemens, Mr. James Swinburne described a new form of electric lamp recently invented by Professor Nernst, of Göttingen, consisting of a little rod of refractory material, mainly thoria, supported between two platinum electrodes. Such a substance at ordinary temperatures is a non-conductor of electricity, but when heated it becomes an electrolyte. Professor Nernst's lamp, therefore, when required for use, is first gently heated—with the smaller sizes an ordinary match suffices—until it begins to conduct; the current then passes and further heats the rod until it attains a temperature of intense incandescence and gives out a beautiful white light. In some circumstances this method of starting the lamp might not be regarded as a very great inconvenience; in others it certainly would. Professor Nernst has, therefore, designed an automatic lamp, lighted simply by turning a switch, in which the required heating of the rod is effected by means of a platinum resistance arranged close to it, which is automatically cut out as soon as the rod becomes hot enough to conduct. The consumption of energy in this lamp Mr. Swinburne stated to be about 1½ watts per candle, including a small series resistance, which is required to correct some instability in running on supply circuits caused by the resistance of the rods decreasing with rise of temperature. The life of the lamps, he said, was at present about 500 hours in good examples. As to cost, he admitted that those supplied with the automatic lighting arrangement must be dearer than the ordinary carbon-filament lamps, but he pointed out that, while the latter became perfectly useless as soon as the filament had gone, in the Nernst lamp it was an easy matter to replace the broken rod with a new one. The Nernst lamp too could be adapted to higher electrical pressures, 500 volts being quite practicable. Moreover, it seems possible that it might be made to stand much greater variations of pressure, and if that proved to be the case it would mean an enormous difference in the designing of distribution mains. The lamp worked equally well on alternating and direct circuits and did not need to be enclosed in a vacuous space. In the discussion Mr. Campbell-Swinton pointed out, as a matter of historical interest, that Jablochkoff, one of the pioneers of electric lighting, many years ago exhibited in London a lamp formed on much the same principle of a strip of kaolin, which also had to be made a conductor by the application of heat. It never, however, came into practical use.

THE ADVANTAGES AND DANGERS OF WATER GAS.

REPORT OF DEPARTMENTAL COMMITTEE.

THE report of the Departmental Committee on the manufacture and use of water gas was issued on Wednesday. The Committee say that in the U. States about 70 per cent. of all the illuminating gas supplied was in 1896 carburetted water gas, and they are informed that the distribution of this gas is still increasing rapidly. In Great Britain there is at the present time plant capable of producing 70 or 80 million cubic feet of carburetted water gas per day, and if this plant were worked to its full capacity it would produce about 24 per cent. of all the illuminating gas supplied in Great Britain last year. The Committee say they are satisfied that the advantages which many gas managers see in the gas may well lead to an increase in its use. They draw attention to the "emergency value" of water gas. Where a heavy fog creates a sudden demand for increased output of ordinary gas, the situation can only be met in default of great storage by putting reserve plant into operation. If coal gas retorts alone are available it will, the Committee say, take two or three days to bring them into action, whereas if there be carburetted water gas plant in reserve it can be started in a very few hours, and made to produce gas with great rapidity.

The Committee deal at length with the danger connected with the manufacture and use of carburetted water gas. As regards use, they say the circumstances under which this gas may be seriously dangerous are comparatively few. Danger arises only when the gas escapes unconsumed, for when burned in the ordinary way the products of combustion of carburetted water gas are no more unhealthy than those of coal gas. The danger to be feared is not from explosion, for there is no greater likelihood of that with water gas than with coal gas, but from poisoning. In the day-time, however, the amount of carbonic oxide is not of serious consequence. An escape of carburetted water gas is as easily detected as one of coal gas, and, except in very special circumstances, can be avoided or remedied long before the atmosphere is in the least degree poisonous. Even at night very slight escapes of an ordinary character, caused, for instance, by imperfections in the joints of fittings, do not appear to be rendered more formidable by the introduction of carburetted water gas. It is practically impossible for a really poisonous atmosphere to be produced by

such escapes, and though it is evident that constant exposure to small leakages of gas may be to some degree prejudicial to health, the Committee do not think that the existence of anything like chronic poisoning by carbonic oxide has been established. It appears, then, that the prospect of any serious result from the distribution of gas containing a high proportion of carbonic oxide is practically confined to cases of large escapes into rooms where persons are asleep. These escapes occur owing to various accidents, such as the unnoticed turning on again of a tap which has been turned off, the blowing out of the gas light, the extinguishing of the light by stoppage of the pipes or turning off at the meter, and the renewed flow of gas without the taps having been turned off. Fatal results have also been traced to breakages or leaks in mains and service pipes, whereby gas has percolated—sometimes becoming deodorised—through the earth into a house, and to leaks through a wall or through a ceiling and floor from a gas pendant in the room below. In these ways accidents have been caused in houses and rooms to which gas was not laid on. The number of fatal accidents due to the above causes with coal gas alone is undoubtedly extremely small, but it is impossible to ascertain with strict accuracy the death-rate from gas poisoning in this country either before or since the introduction of water gas. The returns made by coroners vary too much in form, are too vague, and too often omit all reference to the medical evidence which may have been given.

EXPERIENCE IN THE U.S.A.

As regards the U. States, where water gas has been in use, for a much longer time than in great Britain, and has in many towns replaced coal gas, the most systematic and trustworthy statistics available are those of the State of Massachusetts, where there exists a Board of Gas and Electric Light Commissioners, charged with the duty of recording and investigating accidents from gas and electric light. From the annual reports which they make to the State Legislature, it appears that in Boston, in the year 1886, when the population was 390,393, and the number of gas consumers 29,554, the gas sold amounted to 1,362,711,000 cubic feet, of which none was water gas, and no accidents were recorded. In 1890, with a population of 448,778, and 46,848 gas consumers, 8 per cent of the 1,761,199,500 cubic feet of gas sold was water gas, and there were six deaths from gas poisoning, two being suicidal. In 1895, the population had risen to 496,920, the gas consumers to 68,214, and the amount of gas sold to 1,875,952,800, of which 90 per cent. was water gas, and 24 deaths (including eight suicides occurred. In 1897 the gas consumers numbered 79,893, the gas sold amounted to 2,354,291,900 cubic feet, containing 93 per cent. of water gas, and there were 31 accidental deaths and 14 suicides.

If the danger from water gas is considerable, it is important that in this country it should be dealt with before the causes of it reach unmanageable proportions. It has been argued that inasmuch as it has not been proved that in all places in Great Britain and in the United States the number of deaths by gas poisoning has risen proportionately with the increase of water gas, the greater proportion of carbonic oxide in water gas may possibly not be the determining poisonous factor, that there may be other gases common to water gas and coal gas and in more nearly equal amounts, which are responsible for the fatal effects, or that other constituents in the gases may in some way modify the operation of the carbonic oxide. No evidence was produced in support of these suppositions, and the Committee are unanimously of the opinion that the poisonous action of coal gas and water gas is due solely to the carbonic oxide which they contain, that the higher the proportion of carbonic oxide the greater is the poisonous property of the gas, and that given equal conditions as to size of room, ventilation, flow of gas, length of exposure, &c., the danger to life from an escape of carburetted water gas or of coal gas mixed with any considerable proportion of water gas is far greater than that from an escape of ordinary coal gas. The danger, in fact, increases at a much greater ratio than the proportion of carbonic oxide. It is to be observed that the danger is not confined to accidents. The American figures, at least, show an increasing use of gas for suicidal and even homicidal purposes. It may be argued that, in the absence of poisonous gas, other means of putting an end to life could readily be found; yet it has always been recognised that it is not desirable to give facilities for the use of deadly poisons, and the facility with which murder (particularly child murder) bearing all the appearance of accident could be committed by simply turning on in a small room a jet of gas containing a large proportion of carbonic oxide seems to afford an additional reason for restricting the use of carburetted water gas. The most direct, and, in the Committee's opinion, the only effective method of preventing danger from water gas is to fix a limit which the carbonic oxide in a public and domestic gas supply shall not, in ordinary circumstances, exceed. It is difficult to assign a limit applicable to all circumstances. In some cases 12 per cent. of carbonic oxide in the gas supplied might be proper, in others 16 or perhaps 20 The question depends on a number of circumstances, which must vary in different localities. For instance, the style of gas fittings in general use, and the condition of the mains and service pipes should be considered, and an important factor is the normal pressure under which the gas is distributed at night, as this governs the rate of discharge through a burner, and consequently, to a great extent, the chance of the production of a poisonous atmosphere. A limit of 16 per cent. of carbonic oxide would allow of a mixture of between 30 and 40 per cent. of carburetted water gas, as at present manufactured, with coal gas, a proportion not now ordinarily exceeded in many cases where water gas is in use, while a limit of 20 per cent. would admit of 50 per cent. each of the two gases. The Committee are of opinion that with the present conditions of gas supply 20 per cent. is the highest proportion of carbonic oxide that should be allowed, and that this percentage should be used only under special circumstances. It will probably be found convenient to make use of local control for the purpose of prescribing some of the special conditions relating to the distribution of gas; but, bearing in mind that in many of the largest centres of population the manufacturer of gas is the local authority itself, that where the gas is supplied by a company the districts of several local authorities may be included in the limits of supply, and that in many of the smaller districts the advice of a skilled expert may not generally be available, the Committee think that the actual amount—beyond a certain limit—of carbonic oxide permissible in a public and domestic supply of gas should be fixed by a central department, according to the local circumstances. The

CHIEF RECOMMENDATIONS

of the Committee are that it should be illegal for any person to make and distribute any poisonous gas which does not possess a distinct and pungent smell, and that if there be any water gas in a gas supply the fact should be stated on every demand note. Finally the Committee are so much impressed by the insufficiency and untrustworthiness of the statistics relating to particular causes of mortality gathered from returns of coroners' verdicts that they recommend strongly that some steps should be taken to secure that these verdicts should lend themselves more readily to clear classification by the Registrar General, and in particular they suggest that in every case where the coroner is in possession of a medical certificate of death a copy of that certificate or the medical evidence should be appended to the coroner's certificate when sent to the Registrar General.

THE MANCHESTER SEWAGE SCHEME.

At a meeting of the Rivers Committee of the Manchester Corporation, held on Monday with Mr. Dreyfus in the chair, it was reported that Mr. Rhodes, Mr. Baldwin Latham, and Mr. Wilkinson would represent the Corporation in the Local Government Board inquiry which opened on Friday. The subject of the investigation is the suitability of certain lands at Flixton and Carrington for the purpose of sewage treatment. The application of the Manchester Corporation for power to schedule the property is being opposed, among others, by the Flixton Overseers and Parish Council. It may be remembered that these lands were scheduled so far back as 1893 for the purpose of treating the chemically precipitated effluent of the Davyhulme works, but through effluxion of time the powers then obtained have lapsed. The scheduling of the land in the present instance has been rendered imperative by the continued insistence of the Local Government Board upon land filtration as a process additional to any other scheme of sewage purification which may be determined upon. There are some members of the Rivers Committee who are sanguine enough to believe that the scheduled area will never need to be used as a part of the Manchester sewage scheme. A report was also presented this morning that, subject to the approval of the Council, a provisional agreement had been entered into with Mr. Baldwin Latham under which he was to prepare plans, estimates, etc., of the sewage scheme recommended by the experts appointed by the Corporation. The committee accepted the report and confirmed the agreement.

EFFECT OF STORM FLOWS AT DAVYHULME.

From the last report on the Davyhulme works it appears that the first four weeks of 1899 established a record for the quantity of sewage floating through the precipitation tanks. The first four weeks of last year showed a total flow of 548,000,000 gallons, whereas the quantity which passed through the works during the similar period this year reached the enormous figure of 1,003,547,000 gallons. During December last the Davyhulme works were called upon to deal with 912,123,000 gallons of sewage. The immensity of these quantities has been caused by the heavy rains which were prevalent at the end of last year and the beginning of this. The general average of the sewage flow is only about 24 million gallons per day, whereas during the past month it has averaged nearly 36 million gallons. This unusual flow of liquids has created other difficulties at Davyhulme. The quantity of solids, cinders, etc., carried down by the storm water and deposited in the precipitation tanks is without any previous parallel.

AN ESTIMATE OF THE COST.

Statements are being circulated giving the probable cost of the bacterial system for dealing with the Manchester sewage at £400,000. It is estimated that sixty acres of bacteria beds will be required, the rough estimate of the cost of constructing these being £4,000. per acre, or a total of £240,000. Added to this is the sum to be paid to Mr. Baldwin Latham and his assistants for carrying out the work. This is put down at £8,000. It is further stated that a culvert or tunnel two miles long, with two or three syphons in its course, will have to be constructed. On the basis of the City Surveyor's estimate for the rejected culvert scheme, it is estimated that this will cost £20,000 per mile, or £40,000. Then on Friday there is to be an inquiry respecting the purchase of 213 acres of land which is also required, and which will cost an additional large sum. These items alone, it is said, will amount to well over £300,000. This, with the extras which it is contended are likely to arise, will, it is said, involve the total cost mentioned.

Trade Notes.

Illicit Commissions Bill.—The executive committee of the Association of Chambers of Commerce of the United Kingdom passed the following resolution this week:—"That the Executive Council thank the Lord Chief Justice for having favoured them with a draft of the bill to check corruption, which has been prepared by the Right. Hon. Sir Edward Fry. The Council have duly considered the draft bill, and, without committing themselves to all its details, desire to express their cordial approval of its general scope and object. They are glad to observe that Parliamentary attention will thus be effectively directed to the growing and reprehensible practice of giving illicit commissions, a practice which is greatly injurious to business, and is to be seriously deprecated in the interests of commercial morality."

More Russian Petroleum.—A new naphtha well which has been discovered on the Island of Tscheleken, on the east coast of the Caspian Sea, is causing great excitemeent amongst the Russian petroleum industrials. The Governor of the Caspi territory at Aschabad is simply inundated with requests for concessions, and already temporary buildings have been erected for the purpose of exploring the grounds.

Matriculation Directory.—This directory has just been published as one of the University Tutorial Series by the University Correspondence College Press, and contains articles on all the special subjects for June, 1899, and January, 1900, test papers with model answers and general particulars concerning the advantages offered by the college to students. The price is 1s. from Mr. W. B. Clive, 13, Bookseller's-Row, Strand, W.C.

New Industries for Northwich.—On Tuesday a representative town's meeting was held at Northwich to consider the possibility of establishing new industries to supplement the salt and chemical trades, which are considerably depressed. Mr. Suthurst, chairman of the Urban Council, presided, and he and others, including Mr. Ward, Conservative candidate at the last election, pointed out that with such a magnificent waterway as the Weaver and such good railway facilities, capitalists might advantageously establish varied works. Soap, cotton, pottery, jam, agricultural implements, milk, and bacon factories, etc., were suggested. Mr. Ward, as director of the Salt Union, denied that the syndicate wished to lock land, and promised to support. A committee was formed to promulgate a scheme.

"From Coal to Colour."—The third meeting of the second half of the session of the Heaton Chapel Literary and Philosophical Society was held recently at the Conservative Hall, Heaton Moor, before a crowded audience. One of the members of the Society, Mr. A. G. Green, F.C.S., F.I.C., gave a lecture entitled "From Coal to Colour: a fairy tale of modern science," and illustrated by diagrams, lantern slides, and practical chemical experiments. Mr. Green, after a technical explanation of the theory of valency, said that to the theory of the ring structure of benzine, propounded by Kekeule in 1865, the coal tar industry may almost be said to owe its existence, and proceeded to give an account of the various processes involved in the production of colouring matters from tar. Mr. Green deprecated in the study of chemical science our having too much in view immediate and practical results. The greatest and most valuable discoveries are often the outcome of the disinterested pursuit of science for her own sake. A vote of thanks to the lecturer and Dr. Jensen, and to Mrs. Green for much time spent over the diagrams and lantern slides, was proposed by Mr. Coffey, seconded by Mr. F. W. Follows, supported by Dr. *Ashworth, and carried by acclamation.*

Andersonian Chemical Society.—At an ordinary meeting of this society, Mr. James Robson, F.I.C., in the chair, the first paper read was one by Mr. C. A. Hislop on "The Liquefaction of Gases." Mr. Hislop, after a summary of work previously done on the subject, gave an account of Professor Dewar's recent work on the liquefaction of air and of hydrogen. Mr. Robson, in proposing a vote of thanks to Mr. Hislop, mentioned the interesting fact that Professor Dewar's assistant in these researches was formerly a student at the Andersonian. The next paper on "Electrolysis Applied to Manufactures," was read by Mr. P. Tainsh. Among other processes, Mr Tainsh described the electrolytic methods in use for the refining of copper and of gold, and that for the manufacture of aluminium in use at Foyers. Mr. Tainsh was accorded a vote of thanks.

Market Reports.

TAR AND AMMONIA PRODUCTS.

The spurt in benzols did not last long, and they have fallen back into the former state of stupor, the quotation being 8d. for 90's and 50/90's. Carbolic acids are flat, and without change in price. Naphthas remain unaltered and are practically featureless. Creosote continues in good demand at full prices, and pitch is active and steady in price at 24s 9d. to 25s. f.o.b. East Coast, and 22s. 6d. to 23s West Coast.

Sulphate of ammonia is easier. The market generally has been quiet. Closing prompt values are:—Beckton, £9. 18s. 9d. to £10; London (outside makes), £10.; Hull, £10.; and Leith, £10. to £10. 1s. 3d. Forward business at a standstill.

MISCELLANEOUS CHEMICAL MARKET.

There is a steady continuance of demand for all the main products of the alkali trade. Works all round are busy, though to a large extent running on low-priced contracts. There is rather an improving tone in the market, however, and prices are generally recognised as having touched the bottom. Bleach is in strong request, and price is firm at £4. 5s. softwoods, f.o.r., and £5 hardwoods, f.o.b. Liverpool. Caustic soda stands firm on the spot, current quotations being as follows: f.o.b. Liverpool, 77%, £7. 12s. 6d.; 74%, £7. 7s. 6d.; 70% £6. 17s. 6d.; 60%, £5. 17s. 6d. nett, per ton, 10 ton lots. Ammonia alkali, 58%, £3 17s. 6d. bags, f.o.r. Soda crystals and bicarbonate are firm. Chlorate of potash and soda are 3½d. and 3¾d. per lb. respectively, but with ample supply offering. Sulphur is firm at £4. 10s., f.o.r. Salt cake is dearer at 30s. per ton, in bulk, f.o.r. Lancashire works, and good inquiry thereat. Sulphate of copper has further advanced to £24. 10s. for prompt. Lead salts are all higher. Brown acetate of lime is steady at £5. 5s. to £5. 7s. 6d., c.i.f. Acetic acids in good general demand, but without improvement in price. Acetate of soda firm at £12. 10s., ex ship. Yellow prussiate of potash dearer at 7¾d. Soda firm at 5½d. per lb. Cyanide in strong request at 1s 1d. per lb. White powdered arsenic firm at £16. 10s., f.o.r. Garston, London, &c. For carboiic acids there is only moderate inquiry, and values are unaltered. Aniline oil and salt are if anything a shade lower. Ammonia salts generally are steady. Glycerine has a firmer tendency.

REPORT ON MANURE MATERIAL.

There has been no special feature in the market upon which to comment. Deliveries of manures to the home trade have scarcely commenced, the season having so far been unfavourable for agricultural operations, and meantime manufacturers are delaying further purchasing.

In the forward position, the value of 77/80 % Florida phospate rock is about 8¼d. per unit, c.i.f. to good United Kingdom ports. Tennessee rock is quoted 7d. per unit, 78/80 %, and South Corolina rock, 55/60 % 6d. per unit. Algerian rock, 1899 shipments, is practically off the market.

There is nothing to report in River Plate bones. East Indian bone meal is very scarce on spot, and the value is £5. 7s. 6d. per ton. For parcels afloat, however, £5. 5s. per ton, ex quay Liverpool, would be accepted.

Nitrate of soda is steady at 7s. 7½d. per cwt. for good, up to 7s. 9d. per cwt. for refined quality.

THE METAL MARKETS.

LONDON, Wednesday.—Pig iron quiet: Scotch warrants closed at 55s. 3½d.; Middlesbrough, 48s. 4½d. cash; and hematite, 60s. 1d. Copper easier: Chili bars, G.O.B.'s and G.M.B.'s, closed at £74. 5s. to £74. 10s. cash, and £74. to £74. 5s. 0d. three months. Tin easy: Straits closed at £107. 10s. to £108. cash, and £106. 10s. to £107. three months; Australian, £108. 10s.; English ingots, £111. to £112. Lead steady: Spanish, £14. 10s. English, £14. 15s. 0d.; Silesian spelter, ordinary, £28. 0s. 0d. Nickel, 1s. 2½d. Antimony, £37. 10s. to £38. Quicksilver: First hands, £8. 5s.; second hands, £8. 3s. 6d. *Copper shares* steady: Cape, 4⅜ to 4½; Copiapo, 3 5/16 to 3 7/16;

Libiola, 2 5/16 to 2 7/16; Mason and Barry, 3⅞ to 4⅛; Rio Tinto, 40¾ to 40⅞; Tharsis, 8⅞ to 9⅛.

GLASGOW, Wednesday.—Market firm and a good business. Scotch done at 55s. 4d., 55s. 5d., 55s. 3½d., and 55s. 4d.; also at 55s. 7½d., 55s. 6d., and 55s. 6½d. month; buyers, 55s. 3½d. cash; sellers 55s. 4d. Cleveland done at 48s. 6d. to 48s. 5s. cash, and 48s. 8d. to 48s. 8½d. month; buyers, 48s. 4½d. cash; sellers, 1d. more. Cumberland hematite done at 60s. 0½d. to 60s. 2d. cash, and 60s. 4½d., month; buyers, 60s. 1d. cash; sellers, ½d. dearer. Middlesbrough hematite idle.

LIVERPOOL OIL AND COLOUR MARKET.

Wednesday.

OILS.—Palm oil is lifeless, and there is no business doing either for spot or forward. Olive oil is steady but slow of sale, the amount offering being very small. Seville is quoted £31. and Malaga £31. 10s. per tun. Linseed is well held for 19s. to 19s. 6d. per cwt. for Liverpool makes in export casks. Cottonseed steady at 15s. 9d. to 16s. per cwt. Castor oil is in but limited demand at 2 15/16d. to 3d. per lb. for Calcutta and 2⅞d. for French. Tallow firm in all positions with full prices being paid. Resin quiet, and only a small business doing. Common is offered at 4s 1½d. per cwt. Spirits of turpentine firm at 32s. 3d. to 32. 6d. per cwt., with a fair demand thereat. Petroleum quiet at 6⅝d. to 8d. for American, and 5¼d for Russian.

CAKES.—There has been a moderate business concluded in spot parcels of American Western linseed at £6. 12s. 6d., to £7., and at the close the tone is rather quiet thereat; for other imported descriptions there has been little demand experienced, and values are on the easy side, with sellers of River Plate at £7. 7s. 6d., of Russian at £7.7s.6d. to £7. 10s., and of Bombay at £7. 2s. 6d. to £7. 10s. per ton, according to brand for the latter. A moderately fair business is reported in Liverpool makes at previous currencies, viz., £8. 5s. to £8. 10s. per ton, according to brand. Good to choice brands of American decorticated cottonseed have been rather quieter in tone, but values are nominally without quotable change at £6. to £6. 5s., according to quality, whilst Liverpool makes have sold to a moderate extent at steady prices, viz., £6. 7s. 6d. to £6. 15s. per ton, according to brand. Liverpool undecorticated makes are quite steady in tone, with a fair inquiry going on at former currencies, sellers still quoting £4. 16s. 3d. to £5. 5s., according to brand, whilst with heavy arrivals of Egyptian on the quay values are again quoted easier, though there is a continued good inquiry experienced at £4. 10s. to £4. 11s. 3d. per ton, with a fair business concluded at the lower price.

COLOURS.—Prices are steady, and practically without change. Ochres: Oxfordshire—common £10., medium £12., best £15.; Derbyshire—common 40s., medium 50s., best 60s.; Welsh—best 90s.; seconds, 50s., and common, 18s.; Devonshire, 40s. to 45s.; French, J.C., 65s. Umber: 40s. to 45s. White lead: £16. Red lead unchanged. Venetian red: £6. to £10. Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7.; medium, £10.; finest, £20. Zinc oxide: £22. 10s. to £25.;

HULL PAINT, OIL, AND COLOUR REPORT.

Tuesday.

OILS.—The position of linseed and cotton oils upon this market is an improving one, linseed oil having advanced upon the week about 10s., and remains firm; whilst cottonseed oil is about 5s. to 10s. per ton dearer, and also remains firm, the imports of seed being remarkably small in comparison with same time last year. The principal imports into Hull to date against the same period a year ago have been: Wheat, 241,656 qrs. against 220,526; linseed, 36,854 qrs. against 36,728 qrs.; cottonseed, 14,116 tons against 46,369 tons; rapeseed, 8,216 qrs. against 16,919 qrs.; oilcake, 3,141 tons against 2,475 tons (not a very satisfactory situation for the crushers here); Olive oil, 437 tuns against 418 tuns; linseed oil is firm at 17s. 6d spot, naked, and steady forward 17s. 3d. to April; 16s. 6d. May/August; 16s. 3d. Sept./Dec.; boiled and refined £1. to £1. 10s. per ton extra. Refined cotton oil is quiet, yet firm, at 13s. 9d. spot, naked; 13s.10½d. April, 14s. 1½d. May/August; casks, £1. and ordinary barrels, £1. 10s. per ton extra. Olive oil, £32. per tun upwards according to origin; Olive oil soap, £16. 10s. to £17. per ton. Turpentine, 32s. Castor oil, cold drawn pharmaceutical, 28s. in barrels, 3⅜d. in cases; first pressure, 25s. in barrels, 2⅞d. in cases; second pressure, 24s. in barrels, 2¾d. in cases. Oleines have advanced in sympathy with fats about 15s. per ton. Cod oil unchanged. Resins unchanged.

CAKES.—Linseed cakes are steady, and cotton are firm at 2s.6d. per ton advance. Linseed, 95% pure, £8. 5s. to £8. 7s. 6d. per ton; oil cakes (linseed), £7. to £7. 2s. 6d. per ton; Russians, £7. 5s. to £7. 10s. Cotton cakes, best makes, £5. to £5. 2s 6d.; seconds, £4. 17s. 6d. to £5. per ton; decorticated, £6. 10s. to £6. 12s. 6d. Rape cakes, Black Sea, £4. 5s.; East India, £4. 12s. 6d. per ton.

PAINTS.—Business is good. A noticeable feature is Messrs. Reckett's dividend of 24%, and Blundell's of 10%. White and red leads are firm and a trifle dear. Other paints are unchanged.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, Tuesday.

The general market in chemicals continues to retain that slightly improved condition which has been recently manifested though there is no great bulk of business passing, and prices in most cases are much too closely run down for anything like satisfaction to the manufacturers. Copper still advances, and with it sulphate of copper which has added another 10s. to its price during the week. Saltcake has been gaining, but the other ordinary chemicals are as before. The fall goes on in sulphate of ammonia slowly, but necessarily, in the face of the coolness of the buying section, who just now invest to no greater extent than for the arranging of immediate needs. Prompt Leith has been done down to £10. 1s. 3d., and to-day the article is probably procurable at £10., though most makers still stop short of that. Mineral oils and paraffins are all as before.

Chief prices current are:—Soda crystals, £2. 7s. 6d. to £2. 12s. 6d. nett, Tyne; soda ash, £4. 2s. 6d. to £4. 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 5s. to £4. 15s. nett, Glasgow; caustic soda, white, 74° £7. 7s. 6d., 70/72° £6. 17s. 6d., 60/62° £6., and cream 60/62° £6., all nett, Liverpool; bleaching powder, 35/37°, £5. to £5. 10s. nett, Tyne; saltcake, 30s. 0d.; borax, English refined, £16., and boracic acid, £26. nett, Glasgow; bicarbonate of soda, 5-cwt casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s., nett, Liverpool; bichromate of potash, 3½d., less 6% for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d., less 6% for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow); chlorate of potash, 3½d., less 5% Liverpool; nitrate of soda, 7s. 6d. to 7s. 9d.; sulphate of ammonia, £10. to £10. 1s. 3d. prompt f.o.b. Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £23. 10s. early delivery, less 5% Liverpool; paraffin scale, hard, 1⅞d. to 2d. per lb., and soft 2d. per lb.; paraffin wax, 120° semi-refined, 2¼d. to 2½d. per lb.; paraffin spirit (naphtha), 9d. to 10d. per gal; paraffin oil (burning), No. 1, 6½d.; and crystal, 7d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 15s. to £5. 5s., 885° £5. 10s. to £6., and 890/895° £6. 5s. to £6. 10s. Week's imports of sugar at Greenock were 7,121 bags cane unrefined.

TYNE CHEMICAL REPORT.

Tuesday.

Chemicals continue fairly steady, and bleaching powder in good demand at £5. 5s. per ton. Caustic, 70%, £7., and 76/77%, £8. per ton. Soda crystals are firm at £2. 12s. 6d. per ton, gross weight locally. Sulphur £4. 15s. per ton.

Bleaching powder, softs, £5. 5s. per ton, nett; do., hards, £5. 10s. per ton, nett; caustic soda, 76/77%, £8. and 70%, £7. 0s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75°Tw., £2. 12s. 6d. per ton, nett; do., 100°Tw., £3. per ton, nett; do., 140°Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. 0d. per ton, nett; blanc fixe, £6. 10s. per ton nett; chloride of barium, refined crystals, £6. 15s. 0d. per ton, nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt is steady at 9s. 6d. per ton, f.o.b. Tees.

COALS.—Trade continues firm and business good. Coke in strong demand. Best Northumbrian steam rather firmer at 10s. 9d. to 11s. per ton. To-day's prices:—Best Northumbrian steam, 10s. 9d. to 11s. per ton; second qualities, 9s. 9d. to 10s. per ton; small steam 4s. 9d. to 5s. per ton; gas coals, 10s. to 11s. per ton; bunker coals, 8s. to 8s. 6d. per ton; household coals, 10s. to 11s. per ton; coke, 18s. to 21s. per ton.

New Companies.

Ice Trades Finance Synd., Ltd.—Capital £5,000. in £1. shares. This company has been formed to adopt an agreement with J. S. E. de Vesian, J. K. Abel-Knapton, and the Tyler and Ellis Manufacturing Co., Ltd., and to carry on the business of merchants, agents, ice manufacturers, refrigerating store keepers, etc. Table A mainly applies. Registered by J. S. E. de Vesian, 20, New Bridge-street, E.C.

London Oil Development Co., Ltd.—Capital, £1,000. in £1. shares. This company has been formed with objects as fully indicated by the title. The number of directors is not to be less than 2 nor more

than 5. The subscribers are to appoint the first; remuneration as fixed by the company. Registered by Cheston and Sons, 1, Gt. Winchester-street, E.C.

Scottish Copper Mines Syndicate of British Columbia, Ltd.—Capital £25,000. in £1. shares. This company has been formed to to carry on in British Columbia, Canada, or elsewhere, the business of miners, farmers, manufacturers, and dealers in machinery and general produce. The subscribers to the memorandum of association are:—H. Norie, The Hall, Murrayfield, Edinburgh, W.S.; F. Norie, 26, Frederick-street, Edinburgh, W.S.; G. Wood, 8, Bank-street, Edinburgh, S.S.C.; D. Purves, 12, Rose-street, Edinburgh, sanitary engineer; G. Beattie, 136, George-street, Edinburgh, architect; J. Baird, 20, Albany-street, Edinburgh, solicitor; W. Gibson, 41, Northumberland-street, Edinburgh, W.S.

Gazette Notices.

PARTNERSHIPS DISSOLVED.

J. F. L. Barritt and W. Derry, oil manufacturers, Warrington, under the style of The Lubrate Co.

C. A. Swaine and S. Haigh, drysalters, Huddersfield, under the style of W. P. England & Co.

EXPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending February 4th.

Acetic Acid—

Holland,	104 pks.	Little & Johnston
,,	104	A. & M. Zimmermann
,,	85	Lister & Biggs

Acetone—

Holland,	£8	R. W. Greeff & Co.
Germany,	15 dms.	E. Catlin
,,	10	Petri Brs.
Austria,	15	D. T. Domeier & Co., Ld.
Germany,	3	T. Jones & Co.
Holland,	10 dms.	£160 Vokins & Co., Ld.
Germany,	2	R. W. Greeff & Co.

Alkali—

France,	280 c.	J. Harrison & Co.
Belgium,	200	F. Smith

Ammonium Oxalate—

Holland,	£28	R. W. Greeff & Co.

Antimony Ore—

Turkey,	20 t.	F. Dupre & Co
France,	17	H. Grey, Junr
Turkey,	4	M. D. Co.

Arsenic—

Melbourne	50 cks.	W. & S. Bowditch
Portugal,	111 55 brls.	Coveney & Westray

Barytes—

Holland,	50 pks.	W. H. Carey & Sons
,,	134	Taylor Brs.
,,	40	P. Jantzen
Belgium,	32	Leach & Co.
,,	86	O'Hara & Hoar
,,	33	J. L. Lyon & Co.
Germany,	76	,,
Holland,	368	W. Harrison & Co.

Bones—

Hong Kong,	1 t.	Anning & Cobb
Queensland,	21	Goad, Rigg & Co

Brimstone—

Italy,	102 t.	G. Boor & Co.

Bromide Iron—

Germany,	£210	A. & M. Zimmermann

Caoutchouc—

Straits,	298 c.	E. Boustead & Co.
,,	134	Gilman Brs. & Co.
,,	80	Butler's Wf., Ld.
P. E. Africa,	36	Hale & Son
Germany,	50	Prop. Bull Wf.
,,	36	Stiebel Brs.
France,	4	H. Johnson & Sons
Germany,	6	L. & I. D. Jt. Co.
Zanzibar,	23	,,
,,	16	Hale & Son
Straits,	125	P. & O. Co.
,,	6	Lewis & Peat
,,	28	Hoare, Wilson & Co.
Zanzibar,	5	Clarke & Smith
P. E. Africa,	8	L. & I. D. Jt. Co.
Belgium,	100	Prop. Bull Wf.
,,	100	J. W. Cook & Co.
U. States,	25	Lewis & Peat

Castor Oil—

France,	30 brls.	Lucas & Spencer's Wf., Ld.
Belgium,	6 cks.	Freudenthal & Co.
France,	20 cs.	Beresford & Co.
Belgium,	40 brls.	Humphrey & Co.

Caustic Potash—

France,	*10 dms.*	*Petri Brs.*

Chemicals (*otherwise undescribed*)

France,	£9	Mory & Co.
,,	10	Blagden, Waugh & Co.
,,	23	J. Harrison
Belgium,	5	John Cockerill Line
Germany,	20	H. Lambert
Belgium,	5	Carter, Paterson & Co.
,,	70	F. Claydon & Co.
Holland,	38	Hernu, Peron & Co.,
Germany,	160	Craven & Co.
,,	12	F. Boenm
,,	20	R. W. Greeff & Co.
,,	12	F. Bochin
Belgium,	300	T. H. Lee
Germany,	570	L. & I. D. Jt. Co.
,,	1,120	A. & M. Zimmermann
,,	7	Argo S. S. Co.
U. States,	830	S. C. Jones
Q'nsland,	200	H. Hill & Sons
Holland.	21	T. H. Lee

Citrate Lime—

Italy,	40 cks.	B. Jacob & Sons

Cream of Tartar—

France,	5 pks.	F. C. Devon & Co.
,,	9	C. Atkins & Nisbet
,,	73	Lon. & Til. Ltge. C. & D. Co., Ld.

Dyestuffs (*otherwise undescribed*)

Argols

Italy,	272 pks.	Thames S. T. & L. Co., Ld.

Cochineal

Canaries,	12 pks.	Swanston & Co.
,,	4	Hendrey & Martin
U. States,	20	L. & I. D. Jt. Co.

Cutch

Straits,	47 pks.	Prop. Hay's Wf.
,,	40	Anderson, Weber & Smith
U. States,	200	Brown & Elmslie
Straits,	900	Borneo Co., Ld.

Gambier

Straits,	4,030 pks.	Nichs. Wys. Ld.
,,	552	Hoare, Wilson & Co.
,,	336	J. Greig
,,	273	J. W. Cook & Co., Ld.
,,	1,245	J. Swire & Sons
,,	1,426	P. & O. Co.
,,	3	Marshall & French
E. Indies,	252	L. & I. D. Jt. Co.

Indigo

E. Indies,	9 cs.	Tingle, Jacobs & Co.
,,	10 chts.	J. Owen
,,	15	Parry & Co.
,,	24	E. Bower & Co.
,,	27	L. & I. D. Jt. Co.
,,	17	L. Archard
,,	23	T. Barlow & Bro.
,,	46	Croysdale & Co.
,,	11	Schenker & Co.
Belgium,	2 cs.	John Cockerill Line

Shumac

Italy,	500 pks.	C. S. Lovell

Tanners' Bark

Natal,	18 t.	A. & W. Nesbitt
,,	6	Boutcher, Mortimore & Co.
,,	37	J. T. Rennie, Son & Co.
Belgium,	11	Leach & Co.
Sydney,	10	Culverwell, Brooks & Co.

Valonia

A. Turkey,	2 t.	M. D. Co.

Farina—

Holland,	1,150 pks.	J. Barber & Co.
Germany,	30	J. Laing, Son & Co.
Holland,	150	E. Bennett & Co.

French Chalk—

Austria,	£22	Wilson & Co.

Glucose—

France,	200 pks.	200 cwt.	Trier, Meyer & Co.
U. States,	100	550	L. & I. D. Jt. Co.
France,	800	800	W. E. Cole
,,	100	100	Vokins & Co.

Glue—

Germany,	£196	Butler's Wf., Ld.
,,	56	L. & I. D. Jt. Co.
France,	12	Mory & Co.
,,	860	Lon. & Til. Ltge. C. & D. Co
Belgium,	510	T. M. Duche & Sons
Holland,	24	T. H. Lee
Belgium,	408	T. Ronaldson & Co.

Glue Stock—

Germany,	59 bls.	Hicks, Nash & Co.
,,	45	L. & I. D. Jt. Co.

Glycerine—

Germany,	£80	R. W. Greeff & Co.
Holland,	420	J. Barber & Co.
France,	300	H. Hill & Sons

Gutta Percha—

Straits,	520 c.	Jewesbury & Co.
,,	254	Huttenbach & Co.
,,	94	Anderson, Weber & Smith

Kainit—

Germany,	50 t.	F. W. Berk & Co.

Litharge—

Germany,	8 pks.	Butler's Wf., Ld.

Magnesium—

Germany,	£300	Argo S. S. Co.

Manure—

France,	50 t	E. Groschke
,,	100	W. E. Cole
N. Russia,	52	Stewart Brs. & Spencer
E. Indies,	200	A. Hunter & Co.

Methyl Alcohol—

France,	8 cks.	E. Catlin
Germany,	10 dms.	J. Norrenberg & Co.
,,	12	Lister & Biggs
Austria,	25	T. Jones & Co.

Mica—

U. States,	£360	W. M. Smith & Sons
Canada,	20	C. J. Brown

Molasses—

U. States,	535 brls.	3,286 bgs.	J. Forsey
,,	50	315	Deering & Robottom

Molybdenite—

Sydney,	1 cs.	Scotney & Earnshaw

Nickel Salt—

Holland,	£20	J. Barber & Co.

Oak Extracts—

France,	130 pks.	J. L. Levenstein & Sons
Austria,	70	Bailey & Leetham Ld.

Ochre—

France,	88 pks.	J. L. Lyon & Co.
,,	30	J. Kitchen, Ld.
,,	138	W. Harrison & Co.
Holland,	143	Phillips & Graves

Orchella—

France,	93 pks.	Prop. Bull Wf.

Oxalic Acid—

Holland,	30 pks.	R. W. Greeff & Co.

Paraffin Scale—

U. States,	1,816 brls.	Anglo-Am. Oil Co., Ld

Phosphate of Lime—

Belgium,	100 t.	Anglo-Contl. Guano Works

Pitch—

N. Russia,	5 cks	Linck, Moeller, & Co.
,,	4	Union Ltge. Co., Ld.
,,	52	F. & S. Chiesman & Co.
Germany,	26 brls.	H. Hurst

Potash—

France,	16 dms.	J. W. Cook & Co., Ld.

Potassium Carbonate—

Holland,	39 c.	J. Owen
Germany,	2	H. Lambert
France,	150	Petri Brs.

Potassium Oxalate—

Holland,	20 cks.	R. W. Greeff & Co.

Potassium Permanganate—

Germany,	20 kgs.	R. W. Greeff & Co.

Potassium Sulphate—

Belgium,	10 cs.	Sawer, Sons, & Co.

Pyrites—

Portugal,	830 t.	Mason & Barry, Ld.

Rosin—

U. States,	500 brls.	Moore & Hole

Salicylic Acid—

Germany,	9 pks.	Butler's Wf., Ld.

Saltpetre—

E. Indies,	879 bgs.	Perkins & Homer
,,	666	Lucas & Spencer's Wf.
Germany,	64 cks.	J. Hall & Son
,,	20	L. & I. D. Jt. Co.
,,	70	Lucas & Spencer's Wf.

Silicate Soda—

Germany,	2 cks.	H. Lambert

Smalts—

Germany,	4 pks.	Butler's Wf., Ld.

Soda—

Germany,	4 cks.	Argo S. S. Co.
Holland,	300 c.	R. W. Greeff & Co.

Sodium Hyposulphite—

Germany,	17 cks.	Deering & Robottom

Starch—

Germany,	230 pks.	Seaward Brs., Ld.
Germany,	1,410	Horne & Co.
France,	541	F. Claydon & Co.
Belgium,	89	,,
,,	103	Leach & Co.
,,	220	Becker & Wagner
,,	45	Taylor Brs.
,,	1,278	T. H. Lee
,,	382	T. Ronaldson & Co.
U. States,	7	A. W. Latham & Co.
Holland,	1,703	Little & Johnston

Stearine—

Belgium,	50 bgs.	J. Harrison
,,	50	D. C. Thomas & Sons
,,	30	Sawer, Sons, & Co.
,,	113	H. Hill & Sons
,,	63	W. H. Mitchell
France,	142	H. Hill & Sons
,,	150	G. Boor & Co.
U. States,	111 pks.	Lunham & Moore
Holland,	16 cks.	Robinson, Roberts, & Co.

Talc—

Spain,	£165	Blackwell & Co.

Tannin Extracts—

Austria,	130 pks.	Boutcher, Mortimore, & Co.
Holland,	21	F. Claydon & Co.
France,	100	S. M. Frankenstein & Co.

Tar—
N. Russia, 155 brls. Union Ltge. Co., Ltd.
" 207 W. Beard & Son
" 54 F. & S. Chiesmann & Co.
" 71 Linck, Moeller, & Co
117 cks.
Belgium, 19 brls. Poth, Hille. & Co.
Germany, 20 cks. Blagden, Waugh & Co

Tartar—
Italy, 125 pks. B. Jacob & Sons

Tartaric Acid—
Holland, 10 pks. Kirkpatrick, Barr, & Co.

Ultramarine—
Holland, 4 pks. Becker & Wagner
Belgium, 20 J. Harrison

Varnish—
U. States, 44 pks. Taylor Brs.
" 40 Atlantic Transport Co.
Germany, 8 Butler's Wf., Ld.

Waste Salt—
Germany, 55 t. F. W. Berk & Co., Ld

White Lead—
Belgium, 10 pks. J. Harrison
" 19 Soundy & Sons
" 54 T. & W. Farmiloe, Ld.
" 23 J. L. Lyon & Co.
France, 17 Soundy & Sons
Holland, 8 Alder & Co., Ld.
" 20 J. R. Francis & Co.
" 20 A. & M. Zimmerman
" 53 Perkins & Homer
" 16 H. Johnson & Sons
" 53 D. Storer & Sons

Wood Pulp—
Norway, 400 bls. Christophersen, Andrews, & Co.
Sweden, 240 pks. Henderson, Craig, & Co.
" 80 Johnsen & Jorgensen
" 400 W. G. Taylor & Co., Ld.
U. States, 84 "
" 440 Henderson, Craig, & Co.

Zinc Oxide—
U. States, 100 pks. Lon. & Til. Ltge. C. & D. Co.

LIVERPOOL.

Week ending February 2nd.

Alizarine—
Rotterdam, 3 cks. 1 cs.

Aluminium—
New York, 1 cs. T. Ashbury

Ammoniac Salt—
Marseilles, 24 brls.

Aniline—
Antwerp, 19 cks.

Barytes—
Rotterdam, 100 bgs.
Antwerp, 54 cks.

Bones—
Alexandria, 435 bgs.

Boracic Acid—
Leghorn, 109 cks. Goody Cripps & Co

Borax—
Havre, 25 pcs. Cunard S. S. Co., Ld.

Carbolic Crystals—
Hamburg, 6 dms.

Castor Oil—
Marseilles, 5 cs. F. Boehm
Leghorn 5

Caustic Potash—
Rouen, 4 dms. Co-op W'sale Society, Ld.

Chalk—
Rouen, 2 cs.

Chemicals *(otherwise undescribed)*
New York, 64 pks.

Colours—
Rotterdam, 1 brl.
Antwerp, 1 ck.
Hamburg, 10 cs.

Cottonseed Oil—
New York, 150 brls.

Cream of Tartar—
Bordeaux, 12 cks.

Cutch—
Rangoo 250 bxs.

Dyewood Extract—
Philadelphia, 100 bxs. Farnworth & Jardine
New York, 50 brls. M'Arthur & Co.

Farina—
Fiume, 300 bgs.

Fustic—
Vera Cruz, 2,176 bgs Ledward, Bibby & Co.
Kingston, 2,524 pcs.

Glucose—
Dunkirk 100 bgs.
St. John, 233 brls. Colby & Co

Glue—
Rotterdam, 200 bgs.
Hamburg, 10

Glycerine—
Bordeaux, 2 cs.

Lead Ore—
Bordeaux, 2,166 bgs. R. J. Francis & Co.

Lime Acetate—
New York, 2,541 bgs.

Logwood—
Belize, 18 t.
Hamburg, 1 ck.

Manganese—
Hamburg, 13 cks.

Mica—
New York, 10 brls. House & Co.

Myrabolams—
Bombay, 308 bgs. E. D. Sassoon & Co.
" 1,031 W. & R. Graham & Co
" 1,334

Oak Extract—
Fiume, 317 brls. The Oak Extract Co., Ld.
" 200 De Cleremont & Donner

Ochre—
Rouen, 38 cks. Co-op. W'sale Society Ld.
" 31 R. J. Francis & Co.

Paraffin Scale—
Rangoon, 160 bgs.
Baltimore, 100 brls.

Paraffin Wax—
Philadelphia 1,027 brls. Anglo-American Oil Co

Phosphates—
Ghent. 550 t.
Pt. Royal, 1,502
Rouen, 1,500 bgs. Co-op. W'sale Society, Ld.
Brunswick, 1,045 t. Cunard S. S. Co., Ld.

Plumbago—
Genoa, 100 bgs. Goodyear & Co.

Potash—
Rouen, 50 cks.
Dunkirk, 20 dms. Bancroft & Co.
Hamburg, 20 cks.

Potassium Chlorate—
Gothenburg, 20 kgs.

Pyrites—
Huelva, 2,602 t. Matheson & Co

Saltpetre—
Hamburg, 22 cks.

Soap—
New York, 2 cs.
Leghorn, 50
Bari, 102

Soap Lyes—
Marseilles. 50 dms.

Soapstone—
Genoa, 400 bgs. Anglo-Italian Talc & Plumbago Mines Co.

Soda—
Rotterdam, 50 brls.

Starch—
Boston, 110 brls.
Antwerp, 454 cs.
Rotterdam, 25
St. John, 800 sks. Colby & Co.
Hamburg, 80 cs.

Stearine—
Antwerp, 13 bgs.
Rotterdam, 7 bdls.

Sulphur Pyrites—
Huelva, 1,955 t. Matheson & Co.

Tallow—
St. John, 150 tcs. T. W. March & Co.
Pensacola, 300 brls. Topscott, Kitchen & Co.
Campana, 291 cks. A. Shute
New York, 621 tcs. Colby & Co.
" 325 50 hds. Messrs. Laren
B. Ayres, 80 brls.
Boston, 796 tcs.

Tan Extract—
Marseilles, 75 brls.

Tanning Extracts—
Ghent, 20 cks.

Tartaric Acid—
Marseilles, 16 brls.
Bordeaux, 1 cs.
Rotterdam 20 cks.

Ultramarine—
Rotterdam, 20 cks.
Hamburg, 1

Valonia—
Syra, 180 bgs G. C. Cozzifachi
Smyrna, 26 t. Barry Bros.

Waste Salt—
Hamburg, 100 bgs.

White Lead
Antwerp, 11 cks.
Rotterdam, 62

Wood Pulp—
Boston, 624 bdls. Spicer Brs.
" 36 141 cs. Lever Brs.
Antwerp, 26 bls.
Rotterdam, 200
Gothenburg, 12 pks. Schenkenwald & Co.
" 120 bls.
Halifax, 7,976 Chadwick & Taylor

Zinc White—
Hamburg, 80 cks.

MANCHESTER.

Week ending February 4th.

Acetate of Lime—
New York, 1,240 bgs.

Acetone—
Hamburg, 1 ck.

Alizarine—
Rotterdam, qty.

Ammonium Acetate—
Rotterdam, 3 cks.

Ammonium Bicarbonate—
Antwerp, 1 brl.

Aniline Salt—
Antwerp, 13 cs.
Rotterdam, 18 cks.

Antimony—
Rotterdam, 4 cks.

Antimony Oxalate—
Rotterdam, 4 cks.

Bark Extract—
Halifax, 55 cks.

Barytes—
Rotterdam, 5 cks.

Chemicals *(other...*
Rotterdam, 19 cks

Colours—
Rotterdam, 56 cks. 50 cs. bxs. 38 brls.

Copper Pyrites—
Huelva, 1,925 t.

Dried Blood—
Ghent, 20 cs.

Farina—
Rotterdam, 1,760 bgs. W. N. Jackson
Stettin, 3,220 Browne, Geveke, & Co.

Glucose—
Stettin, 1,000 bgs. 160 cks.

Glue—
Antwerp, 9 cks. 60 bls.
Genoa, 10
Rotterdam, 70 bgs.
Stettin, 80

Glycerine—
Genoa, 10 dms.

Indigo—
Rotterdam, 14 chts. 10 brls.

Limestone—
Antwerp, 5 crts. 4 cs.

Oxalic Acid—
Rotterdam, 43 cks.

Paraffin Scale—
New York, 690 brls.

Phosphate Soda—
Antwerp, 8 cks.

Plumbago—
Genoa, 110 bgs. 4 brls.

Potash—
Hamburg, 20 cks.
Rotterdam, 5

Potassium Prussiate—
Bordeaux, 11 cks. J. & P. Hutchison

Sacharine—
Antwerp, 3 cs.

Saltpetre—
Hamburg, 27 kgs.

Soap—
Hamburg, 1 cs.

Soap Lyes—
Bordeaux, 20 cks. J. & P. Hutchison

Soapstone—
Genoa, 100 bgs.

Starch—
Antwerp, 40 cs.
New York, 160 bgs.
Rotterdam, 25
St. John's, 1,500 sks.

Stearine—
Antwerp, 69 bgs.
Rotterdam, 26 brls.

Shumac—
Palermo, 660 bgs. 420 bls.

Tannic Acid—
Hamburg, 10 cks.

Tartaric Acid—
Bordeaux, 20 cks. J. & P. Hutchison
Rotterdam, 40

Tin Chlorate—
Antwerp, 10 cks.

Tin Oxalate—
Rotterdam, 12 brls.

Ultramarine—
Rotterdam, 3 cs.

White Lead—
Antwerp, 5 cks.
Ghent, 5 brls.

Wood Pulp—
Drontheim, 5,234 pks. A. Wertheim & Co.
Gambo, 4,224 lds.
St. John's, 175 bls.
Sarpsborg, 3,655 Kellner, Partington P. P. Co, Ld.

Zinc Oxide—
Antwerp, 20 cs. 20 brls.
Rotterdam, 40

HULL.

Week ending February 4th.

Ac'd—
Rotterdam, 3 cks. Hu & Netherlands S. S. Co

Alizarine—
Rotterdam, 3 bxs. 92 brls. 12 pks. Hull & Netherlands S. S. Co.

Antimony—
Bremen, 5 cks Veltmann & Co

Barytes—
Amsterdam, 77 cks. Hull & Netherlands S. S. Co.
Antwerp, 71 Wilson, Sons, & Co., Ld
Bremen, 100 bgs. Veltmann & Co.
Rotterdam, 55 Hull & Netherlands S. S. Co.

Castor Oil—
Trieste, 10 cs. Wilson, Sons, & Co., Ld.

Chemicals *(otherwise undescribed)*
Antwerp, 29 dms. Wilson, Sons, & Co., Ld.
Hamburg, 6 cks. "
Rotterdam, 4 Hull & Netherlands S. S. Co.
Stettin, 30 Wilson, Sons, & Co., Ld.

Chromium Fluoride—
Rotterdam, 10 cs.

Colours—
Antwerp, 15 pks. 7 cks. Wilson, Sons, & Co., Ld.
Bremen, 3 cs. 1 dm. J. Pyefinch & Co.
Hamburg, 1 ck. 1 cs. Wilson, Sons, & Co., Ld.
Rouen, 35 cks. "
Rotterdam, 50 pks. 1 cs. 8 bxs. 65 brls. 9 cks. Hull & Netherlands S. S. Co.

Cottonseed Oil—
New York, 260 cks. Wilson, Sons, & Co., Ld.

Cream of Tartar—
Bordeaux, 6 cks. W. Moran & Co.

Cryolite—
Copenhagen, 1 ck. Wilson, Sons, & Co., Ld.

Dyewood—
Rotterdam, 11 cks. Hull & Netherlands S. S. Co.

Farina—
Antwerp, 115 bgs. Wilson, Sons, & Co., Ld.
Harlingen, 200 bls. Hull & Netherlands S. S. Co.
Stettin, 400 bgs. Wilson, Sons, & Co., Ld.

Felspar—
Gothenburg, 20 bgs. Wilson, Sons, & Co., Ld.

Glucose—
New York, 150 brls. Wilson, Sons, & Co., Ld.

Glue—
Christiansand, 1 brl. Wilson, Sons, & Co., Ld.
Dunkirk, 18 cks. ,,
Rouen, 5 ,,
Rotterdam, 10 bgs. Hull & Netherlands S. S. Co.
1 cs.

Glue Stock—
Rouen, 198 bls. Wilson, Sons, & Co., Ld.

Grease—
Hamburg, 6 cs. Wilson, Sons, & Co., Ld.

Indigo—
Rotterdam, 5 brls. Hull & Netherlands S. S. Co.

Manure—
Christiansand, 2 bgs.

Naphthol—
Rotterdam, 2 cks. Hull & Netherlands S. S. Co.

Paint—
Hamburg, 5 cks. R. W. Blackwell & Co.

Paraffin—
New York, 120 brls. Wilson,
150 cs. Sons, & Co., Ld.

Phosphate—
Dunkirk, 1,000 bgs. Wilson, Sons, & Co., Ld.

Pitch—
Copenhagen, 50 brls. Wilson, Sons, & Co., Ld.

Potash—
Dunkirk, 16 cks. Wilson, Sons, & Co., Ld.
Hamburg, 21 dms. Bailey & Leetham, Ld.

Pyrites—
Libau, 1,498 t.

Rosin—
Savannah, 4,327 brls. Brough, Brown, Atkinson, & Co.

Saltpetre—
Antwerp, 135 bgs. Wilson, Sons, & Co., Ld.
Hamburg, 10 kgs. ,,

Soda—
Ghent, 402 bgs

Starch—
Amsterdam, 120 cs. Hull & Netherlands S. S. Co.
Antwerp, 120 Bailey & Leetham, Ld.
Bremen, 3,421 pks. Veltmann
1,039 cs. & Co.
Ghent, 228 Wilson, Sons, & Co., Ld.

Shumac—
Palermo, 2,120 bgs. Wilson, Sons, & Co., Ld.

Tallow—
Dunkirk, 152 cks. Wilson, Sons, & Co., Ld.
New York, 18 hnds. ,,
30 cks. ,,

Tartaric Acid—
Rotterdam, 4 cks.

Ultramarine—
Hamburg, 3 cs. W. Moran & Co.
Rotterdam, 1 ck. Hull & Netherlands S. S. Co.

Valonia—
Smyrna, 348 t. W. Tulley & Co.
9 bgs.

White Lead—
Amsterdam, 14 cks. Hull & Netherlands S. S. Co.
Antwerp, 31 Bailey & Leetham, Ld.
Rotterdam, 56 Hull & Netherlands S. S. Co.

Wood Pulp—
Christiania, 2,710 bls. Wilson, Sons, & Co., Ld.
Drontheim, 356 ,,
Gothenburg, 48 ,,
Hamburg, 160 pks. ,,
Hango, 479 bls. J. Good & Sons
1 bx.

Zinc White—
Rotterdam, 21 cks. Hull & Netherlands S. S. Co

GLASGOW.

Week ending February 9th.

Acetic Acid—
Rotterdam, 10 crbys.

Alizarine—
Rotterdam, 25 cks. J. Rankine
16 brls. 1 bx. & Son

Aniline Colours—
Hamburg, 4 cks. 1 cs.

Aniline Salt—
Rotterdam, 4 cks. J. Rankine & Son

Barium Sulphide—
Antwerp, 150 bgs.

Bark Extract—
Baltimore, 5 cks.

Barytes—
Rotterdam, 131 cks. J. Rankine & Son
,, 88 pks.

Bleaching Powder—
New York, 17 crts.

Castor Oil—
Bombay, 245 cks. 2 cs.

Chemicals *(otherwise undescribed)*
Amsterdam, 1 cs. J. Rankine & Son

Colours—
Rotterdam, 5 cks. J. Rankine
1 cs. & Son
,, 4 cks. 130 pks.

Copper Pyrites—
Huelva, 2,080 t. Tharsis Co.

Dyestuffs—
Aniline
Amsterdam, 1 ck. J. Rankine & Son

Dyewood Extract—
Antwerp, 1 ck.

Farina—
Delfszyhl, 775 bgs. J. Rankine & Son

Gelatine—
Hamburg, 10 cs.

Glucose—
Baltimore, 250 brls.

Glue—
Rotterdam, 20 bgs. J. Rankine & Son
Antwerp, 16 cks.

Oleine—
Bombay, 112 cks.

Paraffin Wax—
Baltimore, 200 brls.

Phosphates—
Dunkirk, 1,000 bgs.

Potash—
Rotterdam, 5 cks. J. Rankine & Son
Hamburg, 62 dms.

Potassium Nitrate—
Hamburg, 8 cks.

Potassium Prussiate—
Antwerp, 4 cks. 4 dms.

Soap—
Bombay, 10 dms.

Starch—
Baltimore, 1,050 bgs.
New York, 48 bxs. 10 bdls.
,, 1,272 sks.
Rotterdam, 13 cs. J. Rankine & Son
Antwerp, 1 ck. 60 cs.

Tar—
Christiansund, 10 brls.

Ultramarine—
Rotterdam, 4 cks. J. Rankine
4 cs. & Son

White Lead—
Rotterdam, 91 cks. J. Rankine & Son
,, 67 pks.

Wood Pulp—
St. John, 691 bls.
Christiania, 46 pks.

Zinc Oxide—
New York, 130 brls.
Antwerp, 25 cks.

TYNE.

Week ending February 4th.

Acids—
Hamburg, 1 cs.

Barytes—
Antwerp, 55 cks. Tyne S. S. Co.
Rotterdam, 200 bgs.
67 cks. ,,

Castor Oil—
Antwerp, 28 brls.

Colours—
Antwerp, 4 cks. Tyne S. S. Co.
Hamburg, 16 dms.
33 cks. ,,

Cryolite—
Copenhagen, 2 cks. Neisen, Andersen, & Co.

Farina—
Hamburg, 50 bgs. Tyne S. S. Co.

Glucose—
Baltimore, 450 brls. Furness, Withy, & Co.

Glycerine—
Hamburg, 10 tins Tyne S. S. Co.

Grease—
Antwerp, 46 cks. Tyne S. S. Co.

Paraffin Scale—
New York, 1,793 pks. C. Hassell & Son

Phosphate—
Antwerp, 500 bgs. Tyne S. S. Co.
Pensacola, 1,500 t. Watts, Watts, & Co.

Pyrites—
Huelva, 1,677 t. Tharsis Sulphur & Copper Co.

Salt—
Hamburg, 500 bgs. Tyne S. S. Co.

Soap—
Rotterdam, 2 cs. Tyne S. S. Co.

Starch—
Antwerp, 146 cs. Tyne S. S. Co.
Rotterdam, 158 ,,

White Lead—
Rotterdam, 12 cks. Tyne S. S. Co.

Wood Pulp—
Baltimore, 779 rolls Furness, Withy, & Co.
Christiania, 2,505 bls. P. H. Matthiessen & Co.
,, 122 pks. ,,

GOOLE.

Week ending February 1st.

Alizarine—
Rotterdam, 78 cks. 4 cs.

Alkali—
Calais, 11 cks.

Aniline—
Rotterdam, 190 cks. 44 cs.

Anthracene—
Boulogne, 1 ck.

Antimony—
Boulogne, 2 cs.

Bark—
Antwerp, 623 bgs.
Ghent, 124

Caoutchouc—
Boulogne, 6 cks.

Chemicals *(otherwise undescribed)*
Hamburg, 20 cks. 1 cs. 1 pk.

Colours—
Hamburg, 2 cs.

Dyestuffs *(otherwise undes.)—*
Amsterdam, 6 cks. 2 cs.
Boulogne, 69 3 11 pks.

Farina—
Delfszyhl, 250 bgs.
Hamburg, 100

Glue—
Antwerp, 14 bgs.
Boulogne, 5 bs.
Rotterdam, 20

Logwood—
Hamburg, 38 t.

Potash—
Calais, 23 dms.
Hamburg, 2

Rosin—
Brunswick, 6,911 brls.

Saltpetre—
Antwerp, 169 bgs.
Hamburg, 53 cks.
Rotterdam, 100 bgs.

Soda—
Antwerp, 7 dms.

GRIMSBY.

Week ending February 4th.

Barytes—
Hamburg, 2 cks.

Caoutchouc—
Antwerp, 9 bgs. 7 b.
Hamburg, 1 1 cs.
Rotterdam, 1 pk.

Chemicals *(otherwise unaescribed)*
Antwerp, 100 bgs.
Hamburg, 8 cks. 1 crte.

Colours—
Antwerp, 14 cks. 107 pks.
Hamburg, 5 3 cs. 38
Rotterdam, 1

Dyestuffs *(otherwise undescribed)*
Dieppe, 4 cks.
Rotterdam, 3

Farina—
Hamburg, 10 bgs.

Glue—
Hamburg, 6 cks.

Indigo—
Rotterdam, 15 cs.

Soap—
Rotterdam, 160 bxs.

Tar—
Malmo, 15 cks.

IMPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.

Week ending February 8th.

Acids—
E. London, 50 cs. £35

Alkali—
Lyttelton, 3 t. 15 c. £20
Auckland, 4 28

Ammonia—
Melbourne, 20 cs. £27

Ammonium Carbonate—
Rangoon, 1 t. 13 c. £57
Antwerp, 1 34
Treport, 4 19 119
Melbourne, 2 cs. 21
Sydney, 15 21

Ammonium Sulphate—
Ostend, 305 t. 9 c. £3,209
Marseilles, 15 6 160
Grenada, 2 24
Hamburg, 50 500
Bremen, 150 1,525
Dunkirk, 15 151
Ghent, 205 2 2,154

Arsenic—
Lyttelton, 1 t. £18
Wanganui, 90 dms. 84

Basic Slag—
Melbourne, 350 t. £1,100

Borax—
Durban, 10 c. £35
Malta, 15 kgs. 13
Brisbane, 20 cs. 17

Caustic Potash—
Sydney, 1 t. 1 c. £19

Caustic Soda—
Bundaberg, 5 c. £5
Delagoa Bay, 2 t. 13 21
Brisbane, 5 10 37
Sydney, 7 6

Chemicals *(otherwise undescribed)*
Aden, 14 pks. £13
E. London, 1 cs. 26
Rockhampton, 7 14
Cape Town, 7 24
Bombay, 9 27
Pt. Elizabeth, 5 22
Rio de Janeiro, 10 kgs. 32
Durban, 19 280
Karachi, 7 16
Paris, 3 25
Rotterdam, 10 59
Montreal, 32 cks. 116
St. John, 2 15
Halifax, 12 39
Melbourne, 2 48 155
Sydney, 3 1 29
B. Ayres, 16 21
Auckland, 5 kgs. 40
Brisbane, 12 28
Cologne, 20 116
Hamburg, 50 351
Shanghai, 10 49
Amsterdam, 10 59
Brussels, 5 32

Chloride Lime—
Durban, 30 dms. £13

Citric Acid—
Reval, 3 t. £351
Christiania, 5 c. 35

Coal Products—
Alizarine
Lisbon, 2 cks. £36
Boston, 31 336
Aniline
Oamaru, 5 pks. £25
Anthracene
Gothenburg, 250 brls. £187
Benzol
Hamburg, 50 mlts. £95
Carbolic Acid
Hong Kong, 20 dms £8
New York, 5 cs. 25 87
Rotterdam, 24 cks. 102
Calcutta, 4 30 pks. 33
Brisbane, 1 7
Boston, 6 34
Coal Tar Dyes
Timaru, 5 kgs. £50
Creosote
Dieppe, 80,256 galls. £221
Naphtha
Melbourne, 200 dms. £127
Sydney, 130 106
Naphthaline
New York, 363 cks. £219
Constantinople, 10 bgs. 8
Pitch
Pt Said, 200 brls. £72
Hamburg, 28 cks. 34
Brussels, 100 90
Rotterdam, 950 810
Avilles, 1,310 t. 1,556
Antwerp, 1,929 2,499
Alexandria, 200 49
Tar
Hamburg, 250 brls. £115
E. London, 60 dms. 5
Durban, 210 29
Brisbane, 50 10

Copper Sulphate—
Wellington, 5 t. £97
Odessa, 25 9 c. 530
Leghorn, 10 330
Treport, 15 325
Paris, 58 15 1,270

Cream of Tartar—
Wellington, 5 c. £19
Napier, 2 10
Auckland, 1 t. 86
Melbourne, 1 75

Disinfectants—
Melbourne, 59 cs. £54
Napier, 25 dms. 22
Cape Town, 50 10
Sydney, 200 15
Calcutta, 1,177 pks. 202
B. Ayres, 10 14
Rangoon, 30 17
Antwerp, 10 cks. 25
Pt. Elizabeth, 11 17
Delagoa Bay, 40 kgs. 15
Bombay, 19 10

Glycerine—
Gothenburg, 10 t. 4 c. £399

Guano—
Sourabaya, 50 t. 12 c. £550

Manure—
Barbadoes, 50 t. £400
Las Palmas, 8 c. 15
Guadeloupe, 495 3,960
Boulogne, 3 75
E. London, 5 40
Wellington, 2 20

Pearl Ash—
Durban, 6 c. £5
Sydney, 1 t. 4 18

Phosphates—
Grenada, 10 t. £28

Phosphoric Acid—
Grenada, 6 t. £65

Phosphorus—
B Ayres, 4 cs. £37

Potassium Bichromate—
Santos, 1 t. £46

Potassium Chlorate—
Bombay, 1 t. 2 c. £43

Potassium Cyanide—
New York, 2 t. £211
Auckland, 3 336
Tampico, 100 cs. 587
La Paz, 200 1,225
Melbourne, 2 196
Durban, 3 322
Bombay, 5 22
Boston, 30 315
Canton, 3 c. 11

Potassium Prussiate—
Calcutta, 10 c. £45

Potassium Sulphate—
Grenada, 3 t. 2 c. £33

Salammoniac
Yokohama, 2 t. 4 c. £71
Antwerp, 1 32

Salt Cake—
Hamburg, 90 t. £40

Saltpetre—
Wellington, 3 t. 10 c. £76
Melbourne, 4 96
Delagoa Bay, 10 10

Sheep Dip—
E. London, 3 t. 2 c. £115
B. Ayres, 78 16 1,901
M. Video, 77 15 2,293

Soda—
Toronto, 1 t. 7 c. £8
Launceston, 3 5 13

Soda Crystals—
Durban, 2 t. 12 c. £9

Sodium Hyposulphite—
Pt. Elizabeth, 1 t. £6

Sulphur—
B. Ayres, 1 t. £13
E. London, 125 pks. 48
Wellington, 1 7

Sulphuric Acid—
E. London, 20 cs. £13

Tartaric Acid—
Antwerp, 1 t. £100
Auckland, 3 c. 18
Brisbane, 1 1 85
Canterbury, 5 27

LIVERPOOL.

Week ending February 8th.

Alkali—
Valencia, 75 t. £340
New York, 7 15 c. 3 q. 30
Rio de Janeiro, 1 4 1 7
Bombay, 1 18 1 8
Piræus, 1 9 3 6
Varna, 3 3 2 15
Salonica, 14 19 2 60
Boston, 15 4 95
Alexandria, 6 3 25
Progresso, 12 18 3 79
M. Video, 16 18 1 66

Alum—
Alexandria, 7 t. £25
Varna, 2 13 c. 12
Oporto, 10 2 3 q. 50
Madras, 3 17
Tetuan, 1 8 7
Adelaide, 1 10 3 8
Dunedin, 5 26
Rangoon, 10 11 3 59

Aluminium Sulphate—
Dunedin 5 t. 4 c. 2 q. £23

Ammonia—
Rangoon, 1 c. 1 q. £6

Ammonium Carbonate—
Nantes, 1 t. £25
Venice, 3 cks. 4
Marseilles, 18 c. 3 q. 30

Ammonium Muriate—
Naples, 1 t. £17
New York, 25 5 c. 630
Barcelona, 1 8 25
Gothenburg, 1 8 24
Marseilles, 1 8 25

Ammonium Sulphate—
Valencia, 79 t. 10 c. 1 q. £740
Gd. Canary, 52 633
Alicante, 10 5 110
Las Palmas, 55 10 619
New York, 101 16 1,056
Leghorn, 39 12 3 396
Barcelona, 25 7 250

Antimony Sulphide—
Boston, 8 c. 2 q. £66

Arsenic—
B. Ayres, 5 t. 10 c. £88

Basic Slag—
Granville, 690 t. £400
St. Nazaire, 2 9 98

Bleaching Powder—
Ancona, 15 cks.
Baltimore, 167
Boston, 711
Cambral, 18
Cape Town, 40 bxs.
Chicago, 87 80 brls.
Genoa, 84
Leghorn, 66
Lisbon, 51
Maranham, 6
Naples, 37
New York, 62 65
Philadelphia, 545
Rotterdam, 177
Springe Forge, 79
Trieste, 58
Tyrone, 77
Venice, 38

Bone Ash—
Townsville, 1 t. 1 c. 3 q. £13

Boracic Acid—
Melbourne, 1 t. £25

Borax—
Lisbon, 2 t. 3 q. £33
Hamburg, 1 2 17
Antwerp, 1 14
Bremen, 12 198
Vera Cruz, 2 3 32
Rio de Janeiro 2 c. 8
Rotterdam, 12 163

Calcium Chloride—
New York, 10 t. 1 c. £19
Boston, 15 7 29
Napier, 11 5 25
Hamburg, 7 6 16
Sydney, 10 22
N'castle, N.S.W. 30 66

Carbolic Acid—
New York, 4 t. 1 c. 1 q. £48

Carbonic Acid Gas—
Punta Arenas, 4 cs. £37

Caustic Liquor—
Rotterdam, 6 t. 6 c. £25

Caustic Potash—
Sydney, 1 t. 5 c. £33
Adelaide, 2 2 54

Caustic Soda—
Alexandria, 35 dms.
Alicante, 40
Ancona, 10
Antwerp, 12
Barcelona, 570 140 cks.
Bari, 72
Brisbane, 20
B. Ayres, 470
Cartagena, 30 25
Constantza, 35
Copenhagen, 10
Dunedin 50
Gallego, 4 cs.
Galatz, 135
Genoa, 353
Hamburg, 56
Havana, 116
Havre, 68
Hiogo, 121
Leghorn, 105
Limassol, 7
Lisbon, 40
London, 50
Mauritius, 10
M. Video, 100
Naples, 103
N. Orleans, 100
New York, 50
Odessa, 50
Oporto, 50
Osaka, 100
Palermo, 16
Para, 25
Piræus, 132
Placencia de C. 150
Pt. Natal, 14
Progresso, 60
Rangoon, 15
Rio de Janeiro, 105
Rotterdam, 36
San Juan, 6
San Sebastian, 90
Seville, 472 25 brls. 25 kgs.
Singapore, 10
Sourabaya, 250
Sterling, 50
Talavera de La Reigna, 175
Tampico, 463
Tarragona, 15 25 cks.
Toronto, 25
Trieste, 18
Trinidad, 120
Useful Hill, 1 cs.
Varna, 18
Venice, 10
Wellington, 36

Chemicals *(otherwise undescribed)*
Panama, 1 t. £71
La Plata, 1 cs. 4
Rangoon, 5 brls. 24
Bombay, 50 234
Karachi, 5 24
Madras, { 5 / 22 / 2 c. 2,464
Cairo, 30 brls. 97
Rio de Janeiro, 3 320
Mersyne, 1 ck. 6
B. Ayres, 1 7
Lisbon, 1 8
Antwerp, 10 c. 15
Barcelona, 7 74
Hamburg, 1 t. 30
Odessa, 1 10 40
Philadelphia, 12 9 338
Dixcove, 2 cs. 12

China Clay—
Boston, 2,064 cks.
Philadelphia, 449
Rio de Janeiro, 32
Portland, 200 150 t.

Cobalt Oxide—
New York, 4 c. 2 q. £175

Copperas—
Las Palmas, 9 t. 17 c. £20

Copper Sulphate—
Palermo, 25 t. 5 c. 2 q. £497
Ghent, 4 13 92
Naples, 86 11 1,578
Odessa, 10 2 187
Rio de Janeiro, 5 6
Ponte Vedra, 10 1 1 198
Genoa, 105 14 6 2 082
Bari, 69 16 1 1,186
Bordeaux, 364 8 2 6 887
Vera Cruz, 5 11 1 102
Ancona, 14 19 431
Fremantle, 10 189
Nantes, 24 15 449
Oporto, 13 4 232
Cette, 159 9 2 3,350
Leghorn, 120 1 2,169
Lisbon, 86 14 2 1,509
La Plata, 1 10 31
Algiers, 26 15 510
Barcelona, 20 364
Zante, 1 16
Bourgas, 1 10 23
Callao, 2 14 43
Messina, 5 1 81
Melbourne, 15 285
Vigo, 20 2 1 368
B. Ayres, 17 4 2 325
Trieste, 103 2 2 1,930
Patras, 4 15 3 102
Venice, 89 16 2 1,496
Tampico, 5 5

Creosote Oil—
Bordeaux, 450 cks.

Dried Blood—
Las Palmas, 15 t. £108

Dyestuffs—
Logwood
Sydney, 20 bgs.
Logwood Extract
Barcelona, 20 cks.

Dyewood Extract—
Boston, 125 cks.

Glauber Salts—
Bombay, 5 t. £20

Glycerine—
Rotterdam, 10 t. 4 c. £560

Shanghai, 4 12
Baltimore, [24 18 935
Leghorn, 1 43
Brussels, 19 1 q. 54

Guano—
Seville, 7 t. 7 c. £62
Malaga, 80 589
Barcelona, 1 1

Gypsum—
Calcutta, 3 t. 8 c. £180

Lime Acetate—
Genoa, 29 t. £500

Magnesia—
B. Ayres, 5 cs.
Mayaguez, 3
Santander, 10 cks. 5
Toronto, 7
Vera Cruz, 13
" 19 c. 1 q. £26

Magnesium Sulphate—
Bombay, 60 kgs.
Colombo, 1
Rio de Janeiro, 200

Manganese Oxide—
Antwerp, 5 c. 1 q £3

Manure—
Barcelona, 2 t. 9 c. £17
Gd. Canary, 23 10 239

Naphtha—
Sydney, 50 dms.

Oxalic Acid—
Barcelona, 12 c. 1 q. £21

Paint—
Antwerp, 9 kgs. 5 cks.
Aux Cayes, 9
Benguela, 35
B. Ayres, 82
Calcutta, 3 fkns.
Callao, 55 cs. 3
Colombo, 60
Constantinople, 23 bxs.
Gibralar, 72
Guayaquil, 20
Havana, 2
Iquitos, 80 kgs.
Manaos, 10
Maracaibo, 15 1
Matanzas, 1
Milan, 13 pks.
Mollendo, 12 1 brl.
M. Video, 25 cks.
Old Calabar, 3
Pacasmayo, 15
Para, 16 dms. 4 30
Port au Prince, 130
Rio G. do Sul, 20
St. Antonio, 53
San Juan, 9
Santiago de Cuba, 2
Sherbro, 104
Sierra Leone, 108
Talcahuano, 10 brls.
Vera Cruz, 100

Painters' Colours—
Bombay, 251 kgs. 10 cs.
Callao, 5 1 ck.
Guayaquil, 10
Iquique, 1
Iquitos, 15 7 cks.
Manzos, 5
Maranham, 1 10 brls.
M. Video, 14
New York, 8 dms.
Para, 29 2 tcs. 10 cks.
Patras, 6 brls.
Pernambuco, 10 cks.
Rio de Janeiro, 11 brls.
Trinidad, 3 cks.

Paraffin Wax—
Boston, 50 cs.
Gijon, 16 bgs.
Rio G. do Sul, 10 cks.
Samsoun, 20

Phosphorus—
Hiogo, 80 cs. £758
Shanghai, 20 163
Vera Cruz, 5 46

Pitch—
Colombo, 10 cs.
Germany, 195 t. 15 c.
Iquique, 10 brls.

Potash—
Para, 2 c. 1 q. £6

Potassium Bicarbonate—
Stamboul, 2 t. 9 c. 2 q. £90

Potassium Carbonate—
Limassol, 8 c. £9
New York, 9 t. 7 170
Rio de Janeiro, 17 13

Potassium Chlorate—
Ancona, 1 t. 4 c. £38
Bari, 2 60
Foochow, 1 4 51
Hiogo, 21 10 645
Kobe, 5 150
Lisbon, 7 10 239
Naples, 8 12
New York, 10 300
Peranagua, 5 150
Progresso, 2 3
Shanghai, 8 10 280
Sydney, 4 10 135

Rosin—
Buenaventura, 11 bgs.

Salammoniac—
Alexandria, 6 t. £99
Christiania, 6 c. 11
Karachi, 1 4 38
Marseilles, 15 1 q. 25
Melbourne, 1 1 25
Naples, 1 31
Pt. Elizabeth, 5 7
Salonica, 2 2 67
St. John's, 7 11
Smyrna, 6 10
Venice, 1 ck. 9

Salt—
Abonnema, 36 t.
Adelaide, 40
Antwerp, 100 sks.
Axim, 400
Bakana, 16 11 c.
Baltimore, 5,650 bgs.
Black River, 30 t.
Boston, 210
Brass, 300 bgs.
B. Ayres, 1,100 175 brls.
Buenaventura, 100 t. 9 c.
Calcutta, 2,206
Chicago, 3,000
Christiania, 100
150 cs.
Cienfuegos, 200
Copenhagen, 200
Delagoa Bay, 56 bgs. 100
Gibara, 700 250
Hamburg, 50
Havana, 262 4,250
Kingston, 300
Lagos, 2,500 1,250
Livingstone, 1,000
Lucea, 100
Malta, 20
Manaos, 200
Matanzas, 1,000
Melbourne, 106
M. Video, 150
Montreal, 300
N. Orleans, 10,060
New York, 1,430 t. 3 c.
Old Calabar, 128 1
Portland. 100
Porto Rico, 10
Rio de Janeiro, 100 cs.
Rosario, 6 14 50
Rotterdam, 264
Salt Pond 12
San Francisco, 111 8 2
Sierra Leone, 63 10
Townsville, 1,006 3

Salt Cake—
Antwerp, 120 t. £153
Lisbon, 30 49

Saltpetre—
Iquitos, 5 c. £6

Sheep Dip—
B. Ayres, 700 dms.
29 t. 2 c. 1 q. £750
E. London, 1 17 1 10
Sydney, 3 12 79

Soap—
Addah, 100 bxs.
Algoa Bay, 250 20 cks.
Antwerp, 576
Bombay, 885 64 cs.
Boston, 10 brls.
Calcutta, 50 300 bdls.
Callao, 4 cs.
C. C. Castle, 200
Cape Town, 102 20
Chama, 50
Conakry, 750
Delagoa Bay, 330 2
Dixcove, 405
Demerara, 2,291 2
E. London, 50 30
Genoa, 125
Ghent. 1,810
Gibraltar, 20
Gd. Bassam, 10 3
Hamburg, 180 dms.
Hamilton, 150 15
Havana, 200
Iquitos, 325
Johannesburg, 100
Kingston, 1,109 5 5 bdls.
Kurrachee, 25
Lagos, 556
Las Palmas, 175
Leghorn, 3 1
London, 100 9
Lydenburg, 125
Madras, 140
Malta, 20 50
Manaos, 393
Monrovia, 97
Montego Bay, 1,650
New York, 52
Old Calabar, 500
Opobo, 1,000
Para, 1,900 1
Penang, 400
Pt. Natal, 13
Rangoon, 830 71
Rotterdam, 297
St. John's, 1
St. Louis, 1
Salonica, 280
San Francisco, 76
San Juan, 200
Sassandra, 50
Savannah la Mar, 50
Shanghai, 7 743 1
Sierra Leone, 140
Singapore, 757
Smyrna, 20
Sydney, 2 tnks.
Toronto, 900
Vera Cruz, 1
Warri, 100
Windsor, 100
Yokohama, 2

Soda—
Para, 6 cks.

Soda Alkali—
Melbourne, 22 bgs.

Soda Ash—
Aalborg, 200 bgs.
Amsterdam, 100
Ancona, 40 7 cks.
Antwerp, 715
Barcelona, 20
Bari, 250
Boston, 40 370
Brisbane, 195
B. Ayres, 180 brls.
Calcutta, 350 kgs. 8
Callao, 30
Christiania, 430 bgs. 2
Dunedin, 88
Genoa, 600
Ghent, 100
Hamburg, 20
Hiogo, 696
Hong Kong, 73
Leghorn, 180
Lisbon, 22
Malta, 30
Maranham, 68
Melbourne, 360
M. Video, 25 dms.
Naples, 32 cks.
New York. 32 tcs
Philadelphia, 64 65
Piræus, 115 brls.
Rio de Janeiro, 400
Rotterdam, 1,468
Santos, 37
Skien, 50
Tampico, 200
Trieste, 100
Turin, 100 kgs.
Venice, 300 bgs. 100
Wellington, 136
Zante, 510

Soda Crystals—
Alexandria, 51 brls.
Bahia, 15 cks.
Boston, 280
Calcutta, 4
Constantinople, 150
Corfu, 40
Gibraltar. 30
Philadelphia, 140
St. John's, 45 kgs. 25

Sodium Bicarbonate—
Adelaide, 50 kgs.
Antwerp, 80 6 cks.
Barcelona, 345 2
Bombay, 34
Brisbane, 25
B. Ayres, 10
Calcutta, 14 bxs. 7
840 kgs
Cape Town, 23 bgs.
20 kgs.
Dunedin, 100
Galatz, 104 20 dms.
Genoa, 25 39 cks.
Ghent, 16
Havana, 35
Hiogo, 500
Kurrachee, 50
Legborn, 30 2
London, 25
Malta, 48 12 dms.
Melbourne, 180
Mombasa, 25
M. Video, 50
Oporto, 40
St. John's, 30 350
Singapore, 7 cks.
Trinidad, 20
Valencia, 125
Vera Cruz, 40 4 brls.
30 bgs.
Volo, 20
Yokohama, 400 kgs.

Sodium Bichromate—
Syra, 4 cks.

Sodium Carbonate—
Boston, 56 brls.
New York, 56

Sodium Chlorate—
Hamburg, 50 kgs.
Rotterdam, 61
Seville, 10

Sodium Silicate—
Bilbao, 8 brls.

Sodium Sulphide—
Bombay, 8 cks.

Stearine—
Newfairwater, 30 cks.

Sulphur—
Boston, 50 t. 2 c. £214
Ghent, 1 4
Mayaquez, 2 5
Vera Cruz, 19 6

Sulphuric Acid—
Hamburg, 5 t. £301
Maceio, 2 11
Maranham, 1 2 c. 2 q. 15
New York, 2 18 200
Rio de Janeiro, 1 16 13
Rotterdam, 4 13

Superphosphates—
Cullera, 300 t. 1 c. £634
Gd. Canary, 15 52
La Pallice, 663 3 1,094
Las Palmas, 25 53
Nantes, 147 12 2 q. 295
Oporto, 12 31
Valencia, 709 13 1,721

Yarnish—
Barcelona, 7 cks.
Melbourne, 5 dms

Zinc Chloride—
Bombay, 11 t. 19 c. £136
Maranham, 6 5
Oporto, 2 9 41

MANCHESTER.

Week ending February 8th.

Alum—
Beyrout, 25 cks.
Bombay, 96 brls.
Jaffa, 20
Tripoli, 20

Aniline Oil—
Russia. 10 dms.

Aniline Salt—
Belgium, 10 brls.

Benzol—
Switzerland, 1 dm.

Carbolic Acid—
France, 5 cks. 2 cs.
25 brls.
Germany. 25

Caustic Soda—
Beyrout, 100 dms.
Jaffa, 200

Chemicals *(otherwise undescribed)*
Basle, 11 kgs.
2 cks.
Beyrout, 1 cs.
Gabes, 10

Copperas—
Beyrout, 20 brls.
Jaffa, 10
Tripoli, 30

Dyestuffs—
Dyewood
France, 12 bxs.

Glue—
Belgium. 10 cks.
Germany, 10
Holland, 18

Glycerine—
Germany, 10 dms.

Linseed Oil—
Alexandria, 10 brls.

Larnaca, 5
Malta, 2

Naphthol—
Germany, 12 cks.

Naphthylamine—
Germany, 1 ck.

Ochre—
Larnaca, 2 brls.

Paint—
Larnaca, 2 cks. 3 brls.

Painters' Colours—
Larnaca, 2 brls.

Palm Oil—
Holland, 2 cks.

Pitch—
Belgium, 208 t. 9 c.
Cette, 1,046

Red Lead—
Larnaca, 1 brl.

Salammoniac—
Beyrout, 9 brls.

Soap—
Holland 110 cs.
Malta, 4 bxs.

Sodium Bicarbonate—
Alexandretta, 6 kgs.

Sodium Naphthionate—
Germany, 24 cks.

Sulphocyanide Barium—
France, 3 cks.

Tan Extract—
France, 10 cks.

Tar Oil—
Belgium, 10 brls.
Germany, 4

Venetian Red—
Alexandria, 100 cks.

HULL.

Week ending February 4th.

Alkali—
Drontheim, 200 bgs.

Basic Slag—
Morlaix, 324 t.

Bleaching Powder—
Reval, 23 cks.

Chemicals (*otherwise undescribed*)
Amsterdam, 12 cks.
Antwerp, 10
Christiania, 371 slbs.
Copenhagen, 30 btls.
Hamburg, 4 18 cs. 1 pk.
Konigsberg, 10
Reval, 4
Riga, 5 20
Rotterdam, 25 134

China Clay—
Bergen, 40 bgs.

Cottonseed Oil—
Amsterdam, 31 t. 5 c.
Antwerp, 16 5
Bergen, 9 19
Bordeaux, 25 3
Christiania, 1 14
Gothenburg, 13 11
Hamburg, 39 11
Rotterdam, 51 19
Rouen, 3 10
Stavanger, 4 6

Creosote—
Gothenburg, 3 cks.

Dyestuffs (*otherwise undescribed*)
Danzig, 1 cs.

Grease—
Christiania, 4 cks.
Dunkirk, 22
Riga, 8

Linseed Oil—
Amsterdam, 6 t. 7 c.
Antwerp, 5 4
Christiania, 18
Copenhagen, 1 14
Drontheim, 11
Hamburg, 6 15
Rotterdam, 1 1

Manure—
Dunkirk, 700 bgs.

Paint—
Antwerp, 13 cks. 5 cs.

Painters' Colours—
Amsterdam, 2 cs.
Antwerp, { 41 dms 58 pks.
Bremen, 4 cks.
Copenhagen, 7 2 25
Dunkirk, 1
Hamburg, 17 5 dms.
New York, 12
Rotterdam, 78
Rouen, 19 1 pk.
Stettin, 1

Pitch—
Antwerp, 335 t.
Christiania, 8 cks.
Dunkirk, 216 t.

Rosin—
Stavanger, 12 cks.

Salt—
Amsterdam, 20 brls.

Soap—
Bremen, 1 cs.
Christiania, 35
Drontheim, 41

Tar—
Amsterdam, 11 cks.
Antwerp, 10
Bremen, 5
Copenhagen, 5
Dunkirk, 10
Gothenburg, 50
Hamburg, 23
Rotterdam, 7
Stettin, 6 6 tins

Varnish—
Amsterdam, 1 ck.

GLASGOW.

Week ending February 9th.

Alum—
Sydney, £43

Alumina—
Rouen, £20

Ammonia—
Havre, 185 t.

Ammonium Carbonate—
Sydney, 1 t. 11 c. 2 q.

Ammonium Sulphate—
Barbadoes, 50 t.
Barcelona, 20 4 c. 1 q.
Demerara, 92 2
Hamburg, 101 5
Mangalore, 5 1 2
Rotterdam, 156 14
Trinidad, 5 11 3
Valencia, 429 7 2

Barytes—
Rouen, £60

Benzine—
St. Nazaire, £68

Boracic Acid—
Sydney, £95

Carbolic Acid—
Rotterdam, £400

Chemicals (*otherwise undescribed*)
Amsterdam, £24

Copperas—
Sydney, 9 t. 10 c. 1 q.

Cottonseed Oil—
Sydney, 1 t. 10 c.

Creosote—
Christiania, £35 15s.
Lisbon, £860

Dextrine—
U.S.A., £217

Dyestuffs (*otherwise undescribed*)
Bergen, 2 t. 17 c. 2 q.

Dyestuffs—Extracts
Portugal, £21 11s.

Farina—
Amsterdam, £75
Gothenburg, 25

Iodine—
Rotterdam, £1,340

Lead Nitrate—
Paris, £100

Linseed Oil—
Alexandria, 2 t. 1 c. 2 q.
Sydney, 1
Townsville, 13 1

Litharge—
Bombay, £52

Logwood Extract—
Belgium, £32
Portugal, 22

Magnesia—
Hamburg, 5 c. 3 q.

Manganese (Recovered)—
Antwerp, £105
Rouen, 50

Manure—
Barbadoes, 100 t.

Paint—
Cienfuegos, £58 5s.
Newcastle, 54 10
Townsville, 156

Painters' Colours—
Amsterdam, £10
Antigua, 27
Calcutta, 428 5s.
Cape Town, 90
Demerara, 35
Havana, 75
Huelva, 46
Kingston, 22
Matanzas, 21 10
Rotterdam, 2 10
Sydney, 1,162 11
Trinidad, 22 15

Paraffin Wax—
Alexandria, £41
Barcelona, 397
Bordeaux, 109
Cape Town, 49 10s.
Christiania, 2 13
Danzig, 16 11
Lisbon, 21
Rouen, 45
Stavanger, 30

Phosphoric Acid—
Trinidad, £20

Pitch—
Civita Vecchia, £2,171
Havre, 484 t. 15 c.

Potassium Bicarbonate—
Antwerp, £145
Bombay, 175
Ghent, 22
Portugal, 23
Rouen, 232

Potassium Cyanide—
Melbourne, £530
Sydney, 421

Potassium Prussiate—
Barcelona, £155 18s.

Quebracho Extract—
Belgium, £126

Salt—
Sydney, 5 t. 1 c. 3 q.

Sheep Dip—
B. Ayres, £123

Soap—
Calcutta, 1 t. 16 c.
Grenville Bay, 1 6 3 q.
Trinidad, 6 16

Soda—
Bombay, 2 t. 10 c.

Sodium Bicarbonate—
Ghent, 4 t. 9 c. 1 q.
Rouen, 7

Starch—
Lisbon, £47
Rotterdam, 177

Sulphur—
Trinidad, £85 10s.

Tallow—
Amsterdam, 1 t. 5 c.

Varnish—
Bombay, £30 10s.
Sydney 75

TYNE.

Week ending February 4th.

Alkali—
Antwerp, 8 t. 3 c. 2 q.
Copenhagen, 1 3 1

Aluminium Sulphate—
Lisbon, 15 t. 1 c.

Ammonium Carbonate—
Halmstadt, 1 t. 5 c.

Ammonium Sulphate—
Hamburg, 150 t.

Antimony—
Gothenburg, 1 t.

Barium Binoxide—
Hamburg, 2 t. 5 c.
Rouen, 21 6 3 q.

Barium Carbonate—
Antwerp, 10 c.

Bleaching Powder—
Antwerp, 4 t. 1 c. 1 q.
Bergen, 16 5
Christiania, 10 2 1
Copenhagen, 77 2 3
Gothenburg, 50 3
Rotterdam, 12 5

Borax—
Aalborg, 3 t. 11 c. 2 q.
Aarhuus, 1

Caustic Soda—
Antwerp, 5 t.
Bergen, 1 14 c. 3 q.
Christiania, 3 16 1
Copenhagen, 4 18 3

Litharge—
Copenhagen, 1 t. 14 c. 3 q.
Hamburg, 2 18 1
Rouen, 1 7 2

Magnesia—
Antwerp, 1 t. 2 c.
Hamburg, 4 19
Rotterdam, 19 3 q.
Valencia, 2 9 1

Manganese—
Rouen, 3 t. 6 c.

Manure—
Valencia, 254 t. 6 c. 2 q.

Paint—
Antwerp, 4 t. 9 c.
Bergen, 16
Copenhagen, 10
Gothenburg, 4

Painters' Colours—
Antwerp, 4 cks.

Phosphorus—
Valencia, 4 t. 9 c. 1 q.

Slag—
Rotterdam, 208 t.

Soda—
Bergen, 5 t. 3 q.
Christiania, 2 19 c.
Rotterdam, 15 5

Soda Ash—
Hamburg, 2 t. 13 c. 1 q.

Sodium Sulphate—
Gothenburg, 3 t. 3 c.

Sulphur—
Christiania, 50 t.
Gothenburg, 25

White Lead—
Copenhagen, 1 t. 1 c. 1 q.

GOOLE.

Week ending February 1st.

Charcoal—
Hamburg, 90 bgs.

Chemicals (*otherwise undescribed*)
Amsterdam, 1 ck.
Antwerp, 6 dms.
Boulogne, 5 1 cs.
Hamburg, 17

Coal Products (*otherwise undes.*)—
Amsterdam, 52 cks.
Antwerp, 2 1 cs. 20 dms.
Boulogne, 1
Ghent, 6 10 tics
Rotterdam, 27 1

Creosote—
Kuysua, 2,310 cks.

Dyestuffs (*otherwise undescribed*)
Amsterdam, 1 ck.
Hamburg, 3 3 cs.

Logwood—
Hamburg, 194 t.

Manure—
Antwerp, 500 bgs.
Dunkirk, 300
Ghent, 36
Rotterdam, 229

Painters' Colours—
Ghent, 1 ck.

Pitch—
Antwerp, 360 t.
Dunkirk, 252

GRIMSBY.

Week ending February 4th.

Caoutchouc—
Hamburg, 4 cs.
Port au Prince, 1

Chemicals (*otherwise undescribed*)
Dieppe, 8 cs.
Hamburg, 2 cks.

Coal Products (*otherwise undes.*)—
Dieppe, { 1 kg. 98 cks. 1 pk.
Hamburg, 116 cs. 10 btls.

Colours—
Port au Prince, 3 cks. 1 cs.

Painters' Colours—
Antwerp, 2 cs. 3 pks.
Hamburg, 4 cks.
Rotterdam, 2

PRICES CURRENT.

WEDNESDAY, Feb. 15, 1899.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9	&	8/3
,, Glacial .. .. ,,		35/-	
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. per bottle	0	0	9
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	0	11½
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	0
Arsenic, white powdered .. .. nett per ton	16	15	0
Alum, loose lump .. .. ,,	4	5	0
Alumina Sulphate (pure) .. .. ,,	3	15	0
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880 = 28° B .. .. ,,	0	0	2¾
,, = 24° B .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	19	0	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. per ton	10	0	0
,, ,, (grey) Hull .. .. ,,	10	0	0
Aniline Oil (pure) .. .. per lb.	0	0	4¾
Aniline Salt ,, ... ,,	0	0	4¾
Antimony .. .. per ton	37	15	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	4	10	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	5	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizatine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30% A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	8
,, 50/90 ,, ... ,,	0	0	8
Carbolic Acid (crude 60°) .. .. ,,	0	1	11½
,, (crystallised 40°) .. .. .. per lb.	0	0	6¾
,, (liquid 95/97%) .. .. .. per gallon	0	1	0
Creosote (ordinary) .. .. ,,	0	0	3
,, (filtered for Lucigen light) .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	2	7	6
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	2	9
Solvent Naphtha, 90% at 160° .. .. per gallon	0	1	2
Copper .. .. per ton	73	15	0
,, Sulphate .. .. ,,	24	10	0
,, Oxide (copper scales) .. .. ,,	52	0	0
Glycerine (crude) 80% .. .. ,,	24	0	0
,, (distilled S.G. 1250°) .. .. ,,	48	10	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	2	6
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	15	15	0
,, Litharge Flake (ex ship) .. .. ,,	17	0	0
,, Acetate (white ,,) .. .. ,,	26	0	0
,, ,, (brown ,,) .. .. ,,	18	0	0
,, Carbonate (white lead) pure .. .. .. ,,	18	10	0
,, *Nitrate* .. .. ,,	23	10	0

	£	s.	d.
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	7	6
,, ,, (grey) (ex ship) .. .. ,,	7	17	6
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton	9	10	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	15	10	0
,, Borate .. .. per cwt.	2	0	0
,, Ore, 70% .. .. per ton	3	10	0
Methylated Spirit, 61° O.P .. .. per gallon	0	2	0
Naphtha (Wood), Solvent .. .. ,,	0	3	0
,, ,, Miscible, 60° O.P. .. .. .. ,,	0	3	10
Oils:—			
Cotton-seed .. .. per ton	15	15	0
Linseed .. .. ,,	19	0	0
Stearine .. .. ,,	26	0	0
Phosphorus (Yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	0	0
,, Chlorate .. .. per lb.	0	0	3½
,, Cyanide, 98 % .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) 90 % .. .. per ton	22	0	0
,, ,, ,, 75/80 % .. .. ,,	17	15	0
,, Potash Hydrate Liquid 50 % .. .. ,,	10	10	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	2	12	6
,, Prussiate Yellow .. .. per lb.	0	0	7¾
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	0
,, Muriate, 80 % ,, ... ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3 11/16
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % .. nett per ton f.o.r. w'ks.	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, f.o.r. w'ks.	4	5	0
,, ,, (Carb. Soda-ash) 48 % .. ,, ,, f.o.r. w'ks.	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, f.o.r. w'ks.	4	0	0
,, ,, (Soda Crystals) .. .. .. ,, ,, f.o.r. w'ks.	2	10	0
,, Acetate (ex-ship) .. .. ,,	12	10	0
,, Arseniate, 45 % .. .. ,,	13	0	0
,, Chlorate .. .. per lb.	0	0	3¾
,, Borate (Borax) .. .. nett per ton	16	0	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton 10 ton lots	7	12	6
,, ,, (74 % Caustic Soda) ,, ,, ,, 10 ton lots	7	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,, 10 ton lots	6	17	6
,, ,, (60 % Caustic Soda) .. ,, ,, 10 ton lots	5	17	6
,, ,, (pure liquor 90° Tw.) .. ,, ,, 10 ton lots	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,, 10 ton lots	11	10	0
,, Bicarbonate (cwt. kegs) .. .. ,,	6	15	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25 % .. .. ,,	16	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	6
,, Nitrite, 98 % .. .. per ton	26	0	0
,, Phosphate .. .. ,,	10	7	6
,, Prussiate .. .. per lb.	0	0	5½
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	10	0
,, Stannate, 40 % .. .. per cwt.	3	10	0
,, Sulphate (Salt-cake) .. .. per ton	1	10	0
,, ,, (Glauber's Salts .. .. .. ,,	1	10	0
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	4	15	0
Strontium Hydrate, 100 % .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. .. per lb.	0	0	5¾
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton	7	0	0
,, (Roll Brimstone) .. .. ,,	6	0	0
,, Brimstone: Best quality .. .. ,,	4	12	6
Superphosphate of Lime (26 %) .. .. ,,	2	10	0
Tallow .. .. ,,	24	0	0
Tin Crystals .. .. per lb.	0	0	7
,, English Ingots .. .. per ton	107	15	0
Zinc (Spelter) .. .. ,,	28	0	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	7	5	0
,, Sulphate, Crystal .. .. ,,	6	15	0

THE

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CURRENT TOPICS.

THE WATER GAS CONTROVERSY.

THE recent Government report upon the advantages and possible dangers of water gas has helped to re-open discussion on the relative merits and demerits of water gas when viewed from the aspect of the guardian of public health and safety.

Undoubtedly the unrestricted supply of water gas *vice* coal gas would be objectionable, and increase the existing risks of using any non-respirable gas as an illuminant; but the limitations suggested in the previously mentioned report are sufficient to check anything like the wholesale substitution of water for coal gas, even supposing such a thing were anticipated—and, as far as we know, it never has been.

It is admitted that the circumstances under which the introduction of water gas into the ordinary gas supply may be seriously injurious are comparatively few, the chief danger laying in the possibilities of leaky fittings. It is only right, therefore, that all consumers should be advised of the use of water gas, and that the percentage which may be introduced shall be controllable by an independent authority. In this way the public would be put on their guard, and roused to a sense of the wisdom of giving attention to small leakages found to occur during the night, while by defining the maximum amount of water gas to be mixed with the usual supply the risks attaching to small escapes could be reduced to a minimum.

In the matter of abnormal escapes, or the wilful misuse of gas for the purpose of committing suicide, we do not think the addition of water gas up to 30 per cent affects the case at all. Gas can be used now to achieve such illegal ends, and the addition of a reasonable percentage of water gas does not seriously add to the toxic power of coal gas.

Because a few people are disposed to abuse substances, which by their use confer a boon on the community as a whole, it is not fair to deprive the majority of benefits for the protection of a very small minority—for those who are anxious to have facilities for committing suicide are not very numerous. If the fact that several people have taken the lives of themselves or other people with gas containing water gas, is to be used as an argument against its being supplied for illuminating purposes, we must stop the supply of coal gas, which is very serviceable for such illegal purposes. Rivers and bridges must be arched in; all express trains prohibited, and the slow ones provided with a catcher to remove the would-be offender, because all these conveniences, though beneficial to the public, are daily affording means whereby those bent on self-destruction may accomplish their foolish desire. It is, therefore, just as well to consider in a broad-minded way the advisability of driving the use of water gas out of existence, especially as it has proved itself a most useful servant to the public. At the same time we would strongly urge the necessity of its proper use as a component part of

coal gas being accurately defined, and the defined terms being rigorously enforced. If the limits differ rather widely, as the Government report would seem to infer, they should be fixed above all things with due regard to safety, if regulation by a sliding scale prove to be impracticable.

ILLICIT COMMISSIONS.

While sympathising with the objects of Sir Edward Fry's Bill to suppress corrupt practices in trade, we must admit that the chances of its doing anything more than partially checking the most flagrant abuses seem to diminish daily. Much "inducement" is effected through the agency of social enjoyments or invitations to shooting parties and yachting tours. This method of achieving an end is as much a bribe as the giving of money, but if it is to be illegal what *may* a man do? Social relations between people in any way connected in business will be subject to suspicion, and that frequently unjustified, but it will be just as detrimental and unpleasant even if the injustice is eventually admitted. Again, a commercial with bulky samples at his hotel invites a probable customer there to see his goods, and in order to finally talk things over, they lunch together. In fact, the prospective customer may be worth risking a bottle of wine upon. There is no denying that an order is far more likely to result from the luncheon procedure than if they had parted and resumed the consideration of the matter on 'Change in the afternoon. Would not this procedure be illegal, however? Even the offer of a free trial would seem to come under the heading of corrupt practices. It is to be hoped that in endeavouring to suppress secret commissions, this form of bribing may not be made more secret than ever.

IMPORTS AND EXPORTS FOR JANUARY.

THOUGH as a whole the Board of Trade returns for the past month are satisfactory, there is very little improvement in Chemical items. The *imports* of chemicals and oils were less in value. The *exports* of alkali, chemical manures and copper sulphate are also less.

IMPORTS OF FOREIGN AND COLONIAL PRODUCE.

Articles.	Quantities. 1898.	1899.
Margarine ..... Cwt.	70,090	76,456
Copper Ore and Regulus..... Tons	9,302	17,572
Pyrites..... ,,	61,646	59,893
Tin ..... Cwt.	13,975	15,091
Alkali ..... ,,	12,129	36,136
Brimstone ..... ,,	10,134	689
Dyes, Coal Tar ..... £.	42,978	46,104
Saltpetre ..... Cwt.	28,261	28,748
Petroleum ..... Gall.	21,398,923	18,514,911
Turpentine ..... Cwt.	78,419	19,695
Guano..... Tons.	717	2,059
Nitrate of Soda ..... ,,	17,728	8,310
Paraffin Wax..... Cwt.	93,067	95,941
Rosin ..... ,,	243,601	136,255
Tallow and Stearine..... ,,	180,759	161,044
Tar..... Barrels	1,817	3,668
Oil Seed Cake ..... Tons	43,552	44,474
Wood Pulp..... ,,	32,201	25,820
Borax ..... Cwt	10,134	689

EXPORTS OF BRITISH AND IRISH MANUFACTURES.

Articles.	Quantities. 1898.	1899.
Alkali ..... Cwt.	336,731	287,959
Cement ..... Tons.	22,792	29,134
Coal and Coke ..... ,,	2,909,809	3,032,343
Copper, all kinds ..... Cwt.	77,847	86,871
Iron and Steel ..... Tons.	284,189	207,965
Chemical Manures ..... ,,	34,888	30,604
Oils, seed ..... ,,	4,296	2,946
Salt..... ,,	62,417	39,002

Parliamentary Jottings.

SPECIAL RULES IN THE POTTERIES.

In the House of Commons on Monday Sir C. Dilke said: I beg to ask the Home Secretary whether two sets of special rules are in force at present in the potteries; whether, since the alternative rules, as fixed by arbitration, came into operation, any employer has made use of powers, under section 10 of the Factory and Workshops Act of 1891, to pass from the more stringent rules, as originally promulgated by the Home Office, to laxer rules, fixed by arbitration; and, if so, in how many cases this has occurred; and whether, as regards dangerous trades in general, special rules issued for a trade have been altered under the same section at the request of individual employers in so far as they apply to their factories; and, if so, in what cases this has occurred.

Sir M. White Ridley: The answer to the first question is in the affirmative. As regards the second question, I find that out of 400 firms manufacturing earthenware and china which were under what are termed in the question the more stringent rules seven have applied under section 10 of the Act to be allowed to come under the rules as fixed by arbitration, and they have been allowed to do so. With respect to other trades certified as dangerous, it appears that in two out of the very numerous works affected advantage has been taken of the same section. These two were an india-rubber factory and an electrical storage works.

CORONERS AND CASES OF SUSPECTED LEAD POISONING.

Mr. Holland asked the Home Secretary whether his attention had been called to the death of Jane Heath, a potter's colour mixer, of epilepsy, on the 2nd January last, at Burslem, and to the fact that no inquest was held into the cause of her death, and whether he would suggest to the coroner for the district to order an inquest into every case of death where lead poisoning was suspected.

Sir M. White Ridley said he had made inquiries, and found that the death was duly reported to the coroner, who, after consultation with the medical attendants, decided that death was not attributable to lead poisoning, and that an inquest was unnecessary. At the same time, though he (Sir Mathew) had not power to interfere with the discretion of the coroner, he thought that in cases of doubt it was desirable that an inquest should be held.

REPORTS ON DANGEROUS TRADES.

On Tuesday Mr. Tennant asked the Home Secretary whether he could say when the reports of the experts appointed to inquire into various matters connected with the pottery and lucifer match industries would be laid upon the table.

Sir M. White Ridley said he had received the reports from the experts on the lucifer match industry. They were now being printed, and he hoped in a few days to lay them on the table. He had not yet received the report on the pottery industry, but he understood that it was in an advanced state, and when he received it he would lose no time in communicating it to the House.

NON-OBSERVANCE OF WOOL-SORTING REGULATIONS.

Sir J. Fortescue-Flannery asked the Home Secretary whether he was aware that, in the Bradford district in some mills the wool-sorting regulations of the Home Office were not rigidly observed; and whether, having regard to the fact that these regulations had been issued by the Home Office on the joint and unanimous recommendation of employers and employed, he would, in justice to the workers and to those employers who conformed to the regulations, take steps to see that the regulations were fully and generally observed.

Sir M. White Ridley said he regretted to state that a case had just been brought to his notice in which the evidence given at a coroner's inquest pointed to a grave infraction of the rules at one place in the Bradford district, but he had no reason to doubt that the rules were in general fully observed in the places where they were established, and the factory inspectors were doing their utmost to enforce them.

ANSWERS TO CORRESPONDENTS.

Red Arsenic.—We presume you allude to the product which is commercially obtained by heating, in closed retorts, a mixture of arsenical pyrites and common iron pyrites. The red sublimate is mainly a disulphide of arsenic, but has a somewhat indefinite constitution. For more specific information, suppose you try our advertising columns?

P.H.—It is to hand, and shall have our attention.

W.K.—So far we have had no replies.

Personal.—Mr. J. Henry Brown informs us that he has commenced business as metallurgical chemist and expert at 15, Fetter-lane, Manchester, and that he proposes to make the public sampling of cargoes of ores and metals a special feature. Pyrites and pyrites residue sampling and testing will be a speciality.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Improvements in Apparatus for Drying and Carbonizing Vegetable Matter. 2,620. T. Lee. February 6.

Improved Method of Nitrating Cotton, etc. 2,645. T. C. Henchman. February 6.

Improvements in Electrolysis and in Aparatus therefor. 2,656. W. P. Thompson. February 6.

Improvements in the Electrolytic Manufacture of Aluminium, Calcium Carbide, etc. 2,657. W. P. Thompson. February 6.

Improvements in and Relating to the Extraction of Gold, etc. 2,674. F. Irvine. February 6.

Improved Apparatus for the Manufacture of Glass. 2,679. P. T. Sievert. February 6.

Improvements in Distilling Apparatus. 2,691. W. C. D. Whetham. February 6.

Improvements in the Treatment of Refractory Sulphide Ores. 2,712. W. R. Hutton. February 7.

Improvements in Artificial Glue and Size. 2,781. T. A. Haynes. Feb. 7.

Improvements in Manures or Fertilizers. 2,810. J. Crone, D. C. Taylor, and F. Williams. February 8.

Improvements in Apparatus for Washing or Scrubbing Gas. 2,832. S. W. G. Swan. February 8.

Improvements in the Manufacture of Varnish. 2,848. A. J. Smith. February 8.

Improvements in Apparatus for the Distillation of Fatty Acids and the like. 2,858. M. Blumski. February 8.

Improvements in Apparatus for the Manufacture of Air Gas. 2,873. A. H. Poppel. February 8.

Calcining, Roasting, or Drying Furnace. 2,909. J. R. Hatmaker. Feb. 9.

Improved Means for Consuming Smoke. 2,930. W. C. May. Feb. 9.

Coke Oven, with Apparatus for Utilizing the Hot Waste Gases. 3,026. H. Koppers. February 10.

Improvements in Apparatus for the Manufacture of Carbonic Acid. 3,027. C. L. Picot. February 10.

Improved Process for the Production of Iron. 3,062. O. Thiel. Feb. 11.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in and Relating to the Manufacture of Candles. W. C. Greig and J. H. Gardener, both of Hereford-street, Christchurch, New Zealand. Eng. Pat. 25,397. December 1, 1898.

In order to prevent guttering, especially with cheaper forms of candles, an outer coating of material, having a higher melting point than the candle composition itself, is applied. Thus an ordinary stearine candle, with a melting point of about 118° F., is dipped into a bath of paraffin wax, melting at 130° F. On burning, the outer coating forms for the time being a cup, which prevents guttering. In practice, stearine candles are best dipped in paraffin or harder stearine, and sperm or paraffin candles in a mixture of paraffin and beeswax. The melting point can be raised by the addition of resin. There are two figures.

Improvements in the Treatment or Purification of Sewage. C. J. Whittaker and W. C. Bryant, both of Globe Chemical Works, Church, Lancs. Eng. Pat. 14,162. June 27, 1898.

The filter is of the usual coke, or breeze type, with a false, perforated bottom and a device for sprinkling the sewage on to the surface. The chief feature is that the sewage is heated to 70° F. by injecting steam (or passing through a tubular heater), which in passing through the filter heats it, and also the air admitted for oxidation. In this way the fullest growth of the purifying bacteria is fostered. The warmth of the filter bed causes a current of air to rise, and if this current is insufficient to supply the necessary amount of oxygen it may be augmented by a steam blower, which heats the additional air, and forces it up the filter through the perforated bottom. Where the sewage has to be raised to the surface of the filter, the use of a pulsating pump or injector both lifts and heats the sewage. There are two figures, one showing the steam heating system, and the other a suitable heater for use when it is not desirable to dilute the sewage.

Improvements in the Extraction of Cyanogen Compounds from Coal Coke Oven Gas. W. J. Farmer, Eastcheap Buildings, Eastcheap, E.C. J M. Somerville, The Cottage, Farnborough, Kent. Eng. Pat. 4,410. February 22, 1898.

The cyanogen compounds are removed first of all, before the tar and ammonia products, by bubbling the gases through a solution of sodium carbonate, containing a finely divided ferroushydrate salt in suspension. This mixture is kept at 140° F., at which temperature, it is claimed, little or no ammonia salts form, or sulphuretted hydrogen passes into solution; while the hydrocarbon compounds are not affected appreciably. The liquor is placed on a series of trays arranged much in the same way as a gas liquor still. The gases rise from tray to tray by a central opening, being deflected by "spiders," which are sealed by the liquor in each tray. The tops of these "spiders" are cupped, and any liquor which collects through splashing, &c., is drawn off by pipes, and delivered to the bottom of the tray again. There is one figure.

Improvements in the Recovery of Zinc from Zinciferous Slags or Residues. H. E. Fry, Billiter Buildings, Billiter-street, London, and R. Addie, Llansamlet, S. Wales. Eng. Pat. 4,911. February 28, 1898.

The zinc slag is mixed with 10 to 20% of non-bituminous coal or coke and heated to 2,000° F. or 2,500° F. in a regenerative gas-fired furnace of the Siemens type, the hearth of the furnace being made of basic or acid materials according to the nature of the zinc slag. The zinc distills over, the separation of the last traces being assisted by rabbling, or stirring with green-wood poles. For a basic lining, dolomite mixed with anhydrous tar, is suggested, using chrome ore to form a neutral layer between the brickwork of the furnace and the basic lining.

Improvements in or Relating to the Deodorisation of Cocoanut Oil. J. C. W. Stanley, 5, Dewhurst-road, West Kensington. Eng. Pat. 5,807. March 9, 1898.

The cocoanut oil is mixed with water and boiled, at which stage silicate of soda or potash is stirred in, using about one part by weight of silicate to 32 parts by weight of oil. The boiling is continued until the oil is sufficiently deodorised.

A New or Improved Process for the Production of Liquid Detergent or Scouring Water. J. Mayer, junr., Nieder, Ingelheim a/Rhine, and L. Korn, Kupfergasse 2, Cologne a/Rhine. Eng. Pat. 23,246. November 4, 1898.

The detergent mixture is composed of:—500 grams of water, 10 of sulphuric ether, 10 of soap essence (*spiritus saponatus*), 15 of alcohol, 30 of French spirit of turpentine, and 10 of ammonia. When thoroughly mixed the whole forms a good homogeneous liquid which removes spots and coffee stains, etc., from fabrics.

Improved Manufacture of Artificial Rubber or Rubber Substitute. J. Deborde, 9, Hallesches-Ufer, Berlin, S.W. Eng. Pat. 7,745. March 31, 1898.

Glycerine and gelatine melted together form a substance which on cooling exhibits great elasticity under pressure, but is easily broken under tensional strain. By adding ichtyol oil to the hot melt of glycerine and gelatine this evil is remedied. Ichtyol oil is obtained by the dry distillation of a bituminous substance found at Seefeld in the Tyrol, and also by the natural decomposition of fish offal. About 15 parts of the oil are required for 250 parts of the glycerine and gelatine mixture. Of course salts of the oil may be used.

OXYGEN, AND LIFE SAVING IN MINES.

IN the apparatus devised by Dr. Elkan, of Berlin, for use with oxygen from steel storage cylinders for saving life, an india-rubber balloon serves for the reception and transport of the gas from the cylinders to the seat of the accident, the gas being then supplied to the unconscious sufferer by the way of a rubber pipe terminating in a vulcanite piece, which is inserted into the nostrils (not in the mouth, this precaution being necessary on account of the tendency to press the teeth together exhibited by patients recovering strength). When one balloon is empty another full one takes its place. The cost of a cylinder containing a charge of 250 gallons of oxygen, together with the rubber balloon, is only £3. It is, however, not always feasible to supply oxygen gas, or air direct to, the injured, but the latter have to be brought out of the dangerous atmosphere, a proceeding which necessitates the entry of a rescuer into such atmosphere; and as this must be effected as rapidly as possible after the accident, and, therefore, ventilation cannot be waited for, it is necessary to arm the rescuers with some other appliance to enable them to breathe in the polluted air. Of these appliances there are various kinds, ranging from a simple sponge dipped in vinegar up to complex apparatus, the best kind to use depending on the circumstances of the case. Thus, for remaining at work in irrespirable air for a long time, those appliances wherein a supply of air is delivered to the rescuer through a pipe will be employed, such as the Von Bremen diving suit or the Müller helmet, the former of which was used with great advantage in the prolonged recovery work after the catastrophe at Karwin in June, 1894.

Selected Correspondence.

PETROLEUM FLASH-POINT.

To the Editor of the Daily Post.

Sir,—It is perfectly true that in the minds of most of us there has grown up a settled conviction that the "deadly low-flash" must go, and if, as your correspondent imagines there is still a fraction of your readers who do not as yet share this view, perhaps you will allow me to state a few of the reasons upon which our conviction is based.

First, because of the immense loss of life resulting from the use of oil lamps, much of which, we believe, might be prevented if the use of low-flash oil were prohibited. In his evidence before the Select Committee on Petroleum, May, 1896, Lord Kelvin said, "I call it terrible that 25 per cent. of all the deaths by fire in London during the year were due to paraffin-lamp accidents." And terrible, indeed, it is. Of the 500 and more fires occurring in the metropolis every year from this cause, more than a third prove fatal, while in the remainder of the cases serious personal injuries are sustained. Most of these fires, moreover, occur in the poorer districts, and, therefore, even if the victims are so fortunate as to escape with a whole skin, they frequently find themselves burnt out of house and home. It is not contended, of course, that the whole of these accidents arise solely and directly from the use of the low-flash oil, but that a large portion of them do there is scarcely a shadow of doubt.

In this connection I might perhaps be allowed to quote the evidence given by Professor William Ramsay, F.R.S., before the Select Committee in May, 1896. He said: "I can only repeat Mr. Macnab's remarks that on spilling lamps containing oil of 73 deg. flash-point the oil invariably caught fire. On spilling lamps containing oil of a higher flash-point the oil did not catch fire."

Secondly, because there is no real necessity for our continuing to use the "deadly low-flash," when we can procure high-flash oil at the same price. It is within the power of the American oil-producers to supply oil capable of standing the 100 deg. test at almost, if not quite, the same price as they charge for the low-flash oil. As I explained in my last letter, all they have to do is to take a little more time over the refining process, and thoroughly eliminate the naphtha and other deleterious elements before sending the oil to this country. They do it for their home trade—in three fourths of the American States oil such as they send to England is prohibited—and why not for us? Europeans do it. For a year or more the Anglo-Caucasian Oil Company have been selling Testefas oil, flashing at 103 degrees, at the same price as some of the American low-flash oils; and quite recently, according to yesterday's London *Star*, Nobels, the great Russian firm, have commenced the sale of "Star and Crescent High-flash" (test 107 deg) at the same cheap rate. And if this can be done in Europe, where the output is as yet comparatively small, why not in the United States, where, in view of the immense output, production is naturally on a more economical scale? It can be done, and I believe it will be done, even if the millionaires who have grown rich in this unhappy business have to forego a minute fraction of their huge profits.

A further reason is to be found in the fact that the flash-point of 73 deg. is badly founded. As Professor Attfield, F.R.S., pointed out before the Select Committee, "this is the flash-point of a substance which is being burned at temperatures commonly above 73 deg., and, therefore, you are dealing in every lamp so used with an oil beneath your flame which is in a condition of danger!" It would hardly be to the point to explain how this absurd 73 deg. came to be fixed, although a most interesting paragraph could be written on that subject. It will suffice perhaps, if I give another criticism of it—this time from Lord Kelvin. This authority states: "It seems to me that the logical outcome of Sir Frederick Abel's work ought to have been to declare that the 100 deg. test in force in the 1871 Act must be fulfilled by a proper close test. I cannot think how Sir Frederick Abel dropped from 100 deg to 73 deg."

A still further reason for the abolition of the deadly low-flash is to be found in the fact that no alterations in the construction of lamps will, *per se*, secure an immunity from accident. Everybody agrees that there are lamps in the market—mostly of foreign manufacture, let me add—which ought not to be sold; but reform in this direction must be in addition to, and not instead of, raising the flash-point. On this subject Lord Kelvin states: "I am clearly of opinion that in order to avoid accidents the flash-point must be raised, and that no construction of lamp will meet the difficulty." And Dr. Chandler, an American expert, in a report presented to the New York State Board of Health, says: "It is an axiom that no lamp is safe with dangerous oil, and that every lamp is safe with safe oil. What we want is safe oil; with it all lamps will be safe."

If other arguments are wanted they are to be found in the fact that the British Government insists upon having high-flash oil for its light-*houses, military* barracks, etc., and railway companies and other large consumers, who have special reasons for guarding against accidents, invariably use it. I could add still others, but I have written sufficient, I think, to prove my original contention, which was that the interests of humanity demand that "the deadly low-flash" must go.

William A. Remmett.

90, New Street, Birmingham.

To the Editor of the Daily Post.

Sir,—I have only to-day seen the letter upon the above subject appearing in the *Post* of the 14th from Mr. F. G. Pyne, secretary of the Rural Labourers' League. The whole of Mr. Pyne's objection to the raising of the flashing-point seems to be based upon the increase of the price of the oil which he anticipates would be necessary, and which expected increase, he imagines, will be proportionate to the present higher price of the American high-flash oil over the low flash oil. This is, however, quite an unwarrantable conclusion, and is due to a misunderstanding of the whole of the facts of the case on your correspondent's part. It is quite true that at present in country districts the high-flash water white oil, called by the Americans "White Rose," is sold at an increase of something like 4d. per gallon over the 73 oil. This increased price, however, is not due to increased cost, at any rate, to the Americans. It is due to the fact that the demand is not large, and the trade can obtain, and therefore do obtain, the higher price for it. As a matter of fact the actual increase in the wholesale price of this oil is very trifling. It has been stated over and over again in the course of the evidence given before the Committee at the House of Commons that oil having a flashing-point of 100 degs. can be produced at a most trifling extra cost—not more than from a ¼d. to ½d. per gallon. I would remind your correspondent that at the present moment the Russians are pushing most energetically in this country their oil, which has a flashing-point of 103, and which they are selling at the same price as the American 73 oil. Although this oil does not burn quite so well in ordinary lamps, it has the advantage of safety, and it may, I think, be taken for granted that, once the Government in this country puts its foot down and prohibits the sale for illuminating purposes of oil having a flashing-point of less than 100 degs, close test, the Americans will at once adapt themselves to the altered circumstances, and put upon this market oil such as is required at a price at which it will sell, and at which it will compete with the Russians. Your correspondent and your readers will recognise that the trade of the lamp manufacturers and dealers in this country depends upon the public, that unless oil can be procured at a low price lamps will not be used, and the lamp trade will disappear. While fully recognising this, the lamp trade in this country is united in the firm and unalterable opinion that it is absolutely necessary for the safety of the public that the flashing-point of oil in use for domestic purposes should be raised from 73 to at least 100.

In conclusion, I may say that the price of American oil has frequently within a twelvemonth varied as much as 2d. per gallon, sometimes more, but the raised price has not generally been found materially to affect the consumption. At the present moment, I believe I am right in saying the price of oil is something like 1½d. per gallon more than it was at the same period of 1898.

J. W. Bernard Wright,

President of the Petroleum Lamp and Stove Trades Association of the United Kingdom.

New John Street West, February 17.

P.S.—Since writing above I notice your leading article in to-day's *Post*, and while agreeing with same ask you to allow me to refer to one of your remarks in your account of the proceedings on the occasion of the reception yesterday by Mr. Jesse Collings of the deputation of the Federation of Grocers' Associations at the Home Office, in which remark you imply that the lamp trade is opposed to interference with the raising of the flashing point of the oil. Quite the contrary is the case. The Lamp Trade Association, which is composed of the leading lamp manufacturers and dealers in this country is—as indicated in the above reply to your correspondent Mr. Pyne—most strongly in favour of an increase in the flashing point to at least 100 degrees. As to the lamps, we advocate a considerable increase in the thickness of the glass reservoirs sold, the sale of wicks cut into lengths, each length marked with its size, and the sale of all the burners with the size of the wick required stamped on the winder; the properly securing into the burner of all the wick-cases by means of solder, or by any other equally secure means; the attaching of the burner to the reservoirs by means of a screw collar instead of a bayonet catch; a proper regard to the relative size in proportion to the height of the lamp, of the base of the lamp and its container; and the issuing by dealers with lamps sold, and independently, to the public of properly drawn-up instructions as to the character of petroleum and the way in which lamps should be used. The home of the English lamp trade is Birmingham. I earnestly hope that all the local members, as well as the large majority in the House of Commons, will support Mr. Reckitt's Bill.

THE OIL FLASH-POINT.

To the Editor of the Manchester Guardian.

Sir,—The whole of the dealers in petroleum oil will suddenly awake one of these fine mornings to find their trade completely crippled or almost ruined. Your valuable paper comes under the observation of hundreds, perhaps thousands, in the trade who have never entered into the fulness of the meaning of the controversy of low-flash oil *v.* cheap lamps, and this is my excuse for troubling you. The struggle so far has been between oil producers and lamp producers, and to all appearances the mighty dollar has gained the day. Low-flash oil is still to be imported, but the lamp makers and poor dealers are to be placed at the mercy of local authorities or a battalion of inspectors, who will command that all kinds of precautions be taken in the storage, just according to their own particular idea of safety. The lamps which are now in use are to be condemned, and the lamp which the working class positively hate is to be forced upon them. The lamp which the producers of low-flash oil want to force upon the working class cannot be produced at a price to suit the working man's pocket, and if a cheap metal lamp is produced the danger is equally as great as now. Why this roundabout way of settling the matter? Let every dealer be on the alert at once. There is no time to be lost; write your representative in the House of Commons asking him to support the Bill introduced by Mr. Harold Reckitt providing "that the flash-point be raised from 73 deg. to 100 deg." The producers will soon learn how to produce the oil up to the necessary standard without any extra cost to the consumer. Thanking you in anticipation,

I am, etc.,

8, Edmund-street, Seedley. W. H. Page.

Official Memoranda.

(*From the Board of Trade Journal.*)

TARIFF OF THE SOUTH AFRICAN CUSTOMS UNION.

This tariff came into operation on 3rd January this year and applies to the following territories:—Cape of Good Hope, Orange Free State, Natal, Basutoland, and the Bechuanaland Protectorate.

	£	s.	d.
Acetic Acid .. ..per imp. gal.	0	3	0
Blasting compounds, including all kinds of explosives suitable and intended for blasting and not suitable for use in firearms .. .. per lb.	0	0	3
Candles .. .. ,,	0	0	2
Cement .. .. per 100 lb.	0	0	6
Salt—			
(*a*) rock .. .. .. per ton of 2,000 lbs.	0	2	0
(*b*) common, not including refined or table salt .. .. .. ,,	0	5	0
Soap, not including toilet soaps, and soap powders and extracts .. .. per 100 lbs.	0	4	2
Tallow and substitutes .. .. .. ,,	0	4	2

FREE LIST.

Raw Bones.	Carbonate of Potash or Soda.
Raw Hoofs.	Bicarbonate of Potash or Soda.
Raw Horns.	Caustic Potash or Soda.
Fire Clay.	Silicate of Potash or Soda.
Terra Alba.	Soda Crystals.
Glue.	Sheep Dips and Powders.
Guano.	Sulphur.
Manures (all kinds).	Insecticides and Disinfectants.

HAWAIIAN CUSTOMS FREE LIST.

The following materials are admitted to these islands free of duty.

Materials used in Tanning.—Such as oak-bark, catechu, and other substances containing "tannin," and used in the process of tanning.

Fertilisers of every description, whether natural or manufactured, applicable to the soil, and all materials to be used solely and exclusively for the manufacture of fertilisers.

The North Pacific Phosphate and Fertiliser Company is authorised to import free of duty all machinery, plant and materials to be used by it in said mining or manufacturing operations, and in the equipment of works for the manufacture of sulphuric acid and of fertilisers.

Soap manufacture.—For the purpose of encouraging the manufacture of all kinds of soap in the Hawaiian Kingdom, the following articles, caustic soda, sal soda, oil of sassafras, palm oil and borax, when imported for use in the manufacture of soap, are admitted free of duty, under such rules and regulations as may be issued by the Collector-General of Customs, approved by the Minister of Finance.

FIRE-PROOF BUILDING MATERIAL.

Papyristite, an artificial stone largely composed of waste paper pulp, is said to be an improvement on papyrolith, both of which have been invented by Mr. Gehre, a Swiss civil engineer. It can be adapted for various purposes, but is specially intended to serve as a solid, impermeable, and jointless roof, or floor, which, when laid down will present a smooth surface, as if made in one continuous layer. It is claimed to be absolutely fire-proof, and a non-conductor of cold or sound, and although as hard as stone, it has a soft, linoleum-like feeling to the foot, and is noiseless. As there are no grooves or joints in the material, no dust, vermin, or fungi can accumulate, and its weight is much less than that of stone or cement.

Two hundred and twenty pounds' weight of this preparation in a powdered form, when mixed for use and spread to a thickness of 0 3940 inch, will cover a surface of 91½ square feet.

No machinery is necessary to prepare the compound, although, to save labour when large quantities are to be used, an ordinary press can be utilised to advantage. It can be moulded or spread in any desired form or shape. The mixing is done on the spot where it is wanted, and it is transported, like cement, in barrels or sacks. The drying or hardening process is effected 24 hours after spreading, and the papyristite can then, if desired, be polished to a high gloss. It can be cut, sawn, and bored, can be given any desired tint, and can be made to look like mosaic or marble.

It is also said to be valuable for roofing purposes, and the inventor has constructed a light iron frame, on which the material can be laid, in the form partly of plates and partly of mortar, which, when united, produce a smooth, continuous surface. It is adapted to cold as well as tropical regions, and its stone-like qualities prevent it from being destroyed by mice or other vermin. The material will not contract or warp after having been laid down; it is elastic, light, and inexpensive in production.

For schoolrooms, public halls, corridors, bathrooms (both floors and walls), terraces, barns, poultry yards, etc., it will prove a clean and healthy material, and as it does not absorb moisture, dirt, or any other unhealthy substances, it will be an excellent building material.

Trials with papyristite are stated to have been made in Russia and in Brazil with satisfactory results.

It is stated that the inventor will sell raw ingredients to persons desirous of making experiments with the material at 18 marks (about 18s.) per 220 lbs., exclusive of carriage from Zurich.

A sample of the material may be seen on application at the Commercial Department of the Board of Trade, 7, Whitehall Gardens, S.W., any day between the hours of 11 a.m. and 5 p.m.

INDUSTRIAL SYNDICATES IN RUSSIA.

The Austro-Hungarian Consul-General at St. Petersburg reports to his Government that of all the Russian industrial syndicates that of the sugar manufacturers is the best known and the most popular. It was founded at Kiew on the 28th of April, 1887, and was re-established in 1895. The object of this society, to which 210 of the 227 Russian sugar factories belong, is the regulation of the sugar industry by fixing the obligatory exportation of a certain quantity of sugar which cannot be consumed in Russia. For this purpose the syndicate fixes for each factory a normal limit of production for home consumption, and all sugar in excess of this must be exported. In fixing this limit, the demands of the home market and the product of factories not belonging to the syndicate have to be carefully taken into consideration. Another aim of the syndicate is to raise the prices, which fell in consequence of the over-production of the year 1895; and another is to gain more trustworthy accounts of the condition of the provincial markets. The syndicate was obliged to dissolve in 1895, because differences of opinion among certain of the members prevented the necessary renewal of the agreement. But on the 20th of November, 1895, it was re-established, in closer connection with the Government, and on a firmer basis.

A second Russian industrial syndicate was that of the Russian naphtha merchants. As long ago as 1880, the need which this group of merchants felt for common and protective action led to the creation of two monopolies by the firms of two leading manufacturers. As, however, these two were unable to arrive at a common understanding, it was determined to create a single syndicate for the protection of the naphtha industry, and to combine with the American Standard Oil Company. This failed also, and the Russian naphtha merchants, in order to oppose the American companies, determined to form a union of their own in 1895. Those who joined it pledged themselves to export petroleum to the foreign market until the year 1899, and, in case of failure to do so, to be liable to a penalty of a fine. But when the time came, in May, 1898, for a renewal of the engagement, it fell through, and the syndicate ceased to exist, although it has not been without influence on the home petroleum trade.

Sanitas Co., Ltd.—The directors recommend a final distribution of 3¾ per cent., making a total of 7½ per cent. for the past year.

Reports of Companies.

THE SALT UNION, LIMITED.

THE ADVANCE OF PRICES.

The directors of the Salt Union, Limited, in their report for the year ended December 31 last, state that in accordance with a resolution passed at the last ordinary general meeting, on February 28, 1898, requesting the directors to make arrangements for the removal of the head office of the company from London to Liverpool, the change was effected at the end of June last. Two of the four London directors retired at the extraordinary general meeting on April 28 and the remaining two on June 30. Economy and advantage have resulted from the removal of the headquarters to Liverpool, where the bulk of the salt business is transacted. The district managers have also been brought into direct touch with the board, and the lines of further reorganisation have been determined upon. The tonnage of salt delivered by the Union in 1898 was 967,000 tons, as against 1,014,000 tons in 1897. The alterations in the mode of manufacturing chemicals and the change in other industries have still further decreased the demand for salt for industrial purposes and quickened competition amongst salt producers. To the East Indian market there has been an increased supply on lower rates of freight during the last half of the year, the benefits from which have not yet been realised in the accounts, whereas the latter have suffered from the losses incurred by earlier shipments made at high rates of freight. During the year the utilisation of a disused set of salt works belonging to the company by the erection of soap-manufacturing plant and machinery therein has been completed. The company is now producing high-grade soaps for household and toilet purposes, and trusts that the shareholders will give this department their active support. Some of the craft continue to be profitably utilised for the conveyance of general merchandise. The finances of the company having been somewhat hampered by the past policy of buying up properties—about £30,000. having been expended for such purpose since the issue of the "B" debenture stock in 1895—the board intends to sell any surplus property as opportunity offers, reserving the brine, rock salt, and minerals, and guarding against the use of the lands for competing purposes. In August last the salt manufacturers in the Middlesbrough district, including the Union, established the North-Eastern Salt Co., Ltd., which is now in successful operation. Strenuous efforts have been made to form a similar company amongst the manufacturers in the Cheshire, Staffordshire, and Lancashire districts; but it has not yet been found possible to bring this about. A working arrangement has been entered into between most of the outside manufacturers and the Union for maintaining the higher level of prices lately put in operation During the year the sum of £5,924. expended on new works has been charged to the general capital account. The amount standing to the credit of the profit and loss account for salt, brine, carriage, and sundry trading was £131,615., and from other sources £39,140., making the total amount £170,755. After deducting the cost of maintenance of plant, distributors' discounts, agency and other charges set forth in the profit and loss account, the profits from all sources amount to £37,342. From this amount the capital invested in the Weston (Staffordshire) Works and the amount paid under award for dilapidations of those works has been written off £4,550., leaving a balance of £32,792; adding the amount brought forward, £12,531., there is a total of £45,323. The debenture stock interest paid on July 1st, 1898, and January 1st, 1899, amounted to £54,000., leaving a deficit of £8,676. This amount has been transferred from the reserve fund to the credit of profit and loss account.

LEVER BROS., LTD.

The report of the directors of Lever Brothers states that the balance standing to the credit of profit-and-loss account has been appropriated as follows: Dividend on preference shares at the rate of 5 per cent. per annum, £56,250.; dividend on ordinary shares at the rate of 15 per cent. per annum, £120,837. 10s. 1d.; bonus to customers, £56,240. 9s. 7d.; carried to reserve fund, £30,000.; balance carried forward to next account, £28,067. 5s. 2d.—total, £291,395. 4s. 10d. The above dividends on the preference and ordinary shares were paid on the 1st of July, 1898, and the 2nd of January, 1899. The bonus to customers was paid on the 15th of August, 1898, and the 15th of February, 1899.

HAVE ACQUIRED BROOKE'S SOAP.

The directors have recently acquired the business of Benjamin Brooke and Co., manufacturers of the well-known Brooke's soap (monkey brand). In consequence of this purchase it is proposed to increase the ordinary share capital. Resolutions will be submitted at a meeting immediately following the ordinary general meeting for creating 50,000 additional ordinary shares of £10. each.

DIVIDENDS.

United Alkali Co., Ltd.—The full dividend of 7 per cent. on the preference shares for the past twelve months is proposed by the directors, leaving £29,000. to be carried to the next account.

Hartlepools Pulp and Paper Company.—The report of the directors for the six months ended January 31st, 1899, shows that after setting aside £1,500. for depreciation, and after including £875. brought forward from last half year, the balance of profit available for disposal is £3,710., out of which the directors recommend the payment of a dividend at the rate of 10 per cent. per annum, absorbing £2,500., the placing of £1,000 to the reserve fund, and the carrying forward of the balance of £210. to next account.

MICA MINING IN INDIA.

In a paper recently read before the Institution of Mining and Metallurgy, Mr. A. Mervyn Smith gave some interesting particulars about mica mining in the Hazaribagh, Gaya, and Monghyr districts of the Bengal Presidency. The chief marts for native consumption are at Patna and Delhi.

The Native Methods of Mining.—The native mines are of the most primitive kind. Open cuts along the out-crops of the pegmatite veins where books of mica are seen in any quantity. These cuts are continued down 20 or 30 ft. till the sides become dangerous. No timbering is used to keep the sides from falling in, and frequently accidents happen and the miners are buried beneath the fallen walls of the reef. Where exceptionally rich stuff is met, and the vein-stuff is decomposed and soft to some 50 or 100 ft., inclines are put in, and follow down the rich shoots of mica in a most tortuous course, zig-zaging about from side to side with the "leads" of rich ground. Long lines of women near to each other and placed in double row, from the water level to surface, hand out earthen pitchers—called "gurrahs"—to one another; the full pitchers are handed up one line and the empties down the other. As many as seventy women are sometimes placed to remove the water from a mine not 35 ft. in perpendicular depth. The incline, of course, was much more than this in length.

Where the reef is highly felspathic and of large size, decomposition extends to quite a hundred feet or more, and it is here that the largest mining operations are carried on. In order to ventilate the inclines and draw out the mica perpendicular shafts about 2 ft. in diameter are put in. The author counted as many as thirty of these circular shafts along the strike of the reef and within a few feet of each other.

The miners are a local tribe called "Bandathis"; the men, women, and children all working at the mine when they have no agricultural work in the fields. Work is only conducted in the dry months (November to May). Immediately the rains set in, they return to the tillage of their fields. Work is only conducted in the day, beginning about 8 a.m., and giving over at dusk. Where the veins are hard, yet sufficiently rich to pay for the labour, large fires are kindled against the face of the lode, and when the vein stuff is sufficiently heated, water is thrown on to it, when the sudden cooling causes the rock to shrink and crack. Into these cracks wedges of soft iron, locally manufactured from the magnetite iron ores common in this neighbourhood, are driven, and large boulders detached. The exposed books of mica are chiselled out and taken to surface. The books of mica are split into sheets of about one-eighth of an inch in thickness. All the rough edges and flaws are trimmed off by means of a sharp sickle (called "hasawah"), and then sorted according to colour and size. The sheets are in some cases very large, 24 in. by 18 in., being the largest in this district. In the Itakuri Mine, Nellore district, Machas, plates 60 in. by 40 in. have been obtained.

Present Method of Work.—It is only within very recent years that Europeans have taken up the mica industry. Mining is still conducted on purely native methods described above; and although 250 miners are at work in this district, on not a single one is machinery of any kind used, and certainly on none of the properties visited by the author in 1898 was there the least attempt at European methods of mining. The same wasteful, slow, and laborious system practised by the natives for hundreds of years is still in vogue. Men are sent out during the rains to search for likely looking outcrops of mica. The mica-schist being softer than the other members of this series of rocks, is eroded into valleys—the more quartzose beds making the ridges of hills. A certain amount of alluvium and talus from the adjacent hills covers the valleys.

After exceptionally heavy rain, this surface deposit is washed off, and with it the decomposed felspar of the pegmatite veins, leaving exposed tufts of partially decomposed mica. The natives call these tufts "foo-foo." Having discovered several of these "foo-foo" spots, these are marked off for mining operations as soon as the dry season begins. Parties of men, women, and children are set to work on these outcrops, and the books of mica dug out, packed in loads of about 30 lb., and brought in at dusk to the central store.

Here several skilled men are seated on the floor trimming the mica before it is packed away for market. Before each man is a stout peg,

driven firmly into the ground and protruding about 18 in. The books of mica are first split into plates about one-eighth of an inch in thickness, the mica easily splitting into laminæ of any thickness. The trimmers are provided with sharp sickles, and the point of this knife is used for opening the sheets. Imperfect laminæ are now peeled off the plates till both surfaces show a clean even face. The plate is supported against the side of the peg, and the sickle drawn downwards to trim off the jagged ends and irregularities along the edge of the sheets of mica.

After trimming, the plates are sorted for the European market, the United Kingdom and America being the chief buyers. The sheets are first sorted according to quality, four kinds being recognised by the dealers.

1. Ruby mica, hard and tough. 2. White transparent mica. 3. Discoloured and smoked. 4. Black mica and flawed.

The sizing is as follows:—Specials, sheets measuring more than 50 sq. in.; No. 1. Sheets of from 36 to 50 sq. in.; No. 2. Sheets of from 24 to 36 sq. in.; No. 3. Sheets of from 16 to 24 sq. in.; No. 4. Sheets of from 10 to 16 sq. in.; No. 5. Sheets of from 6 to 10 sq. in.; No. 6. Sheets of from 4 to 6 sq. in. Specials bring as much as £1. a lb. according to size of sheets.

The sheets are trimmed irregularly into any shape they will take to clear them of flaws. Should square, rectangular, or diamond-shape sheets be wanted, a special rate has to be paid for these to allow for the great waste.

The sheets are packed in boxes of 1 cwt., and transported on carts to the nearest railway station, 100 miles distant. From thence it goes to Calcutta and shipped to London or the United States of America.

Market and Output.—During the year 1895-96, 8,913 cwt. of mica were exported from India of which the mines under review contributed 8,835 cwt., valued at Rs. 995,000 or £66,000. The yield of the mines may be placed at double this figure, one-half being required for the Indian market, and these chiefly of the inferior kinds.

The export trade is a growing one, as the following figures will show:—

Exports.

	1892.	1893.	1894.	1895.	1896.
Bengal .... cwt.	2,298	3,310	4,843	5,126	8,835

Hard, sound, ruby mica is much used for the doors of glass and steel furnaces where extreme heat is required.

A method of cementing sheets of mica into a cardboard has been recently patented in Germany, and this cardboard is used for coating boilers, mica being a non-conductor of heat. It is also manufactured into helmets for fire-brigade men, packing for fire-proof rooms, etc. Thinner sheets are made into envelopes for wrapping valuable documents.

Quantity of Mica Available.—At present, India yields the bulk of the mica consumed in the arts, and of this quantity nearly all comes from the district described.

The pegmatite veins in this locality are numerous and of large size, and are in places extremely rich in mica, nearly one-third of the vein-stuff being of this material. The quantity of mica available is practically inexhaustible.

The present method of mining is wasteful in the extreme, and fully nine-tenths of the mica extracted from the mines is injured and rendered unfit for export.

Thousands of tons of waste mica are to be seen at the mouths of the mines and at the dressing floors. Probably the new patented method of cementing mica into cardboard may create a market for this.

There cannot be the slightest doubt that when European methods of mining are introduced, the cost of production will be materially reduced, the waste will be much less, and a better quality of mica will be secured. At present only the decomposed, or partially decomposed, vein-stuff is mined. Here the mica must also undergo a partial decomposition, but of course not to anything like the extent of the felspar. In the hard vein-stuff the mica is hard and tough, and this class of mica commands a better price.

Some of the veins yield black mica (biotite). This is largely used as a drug by Hindus and Mohammedans. Reduced to a powder, it is supposed to be very efficacious in cases of dysentery.

The sheets of mica are at times very queerly marked. In places one-half of each sheet will be muscovite and the other half biotite, the line of division between the two colours being a perfectly straight line, and there being no apparent change beyond the colour in the uniformity of the sheet. Other sheets again are marked with a chequered pattern in black lines, the lines being due to magnetite. Again there are dendritic inclusions of white quartz between the laminæ. All these markings take from the value of the sheets. The most esteemed colours are pure ruby, amber, light green, transparent white. There is also a silver white, which the natives prize for inlaid work.

A demand for Indian mica has lately sprung up in the United States of America. In 1895 the quantity taken was 1,900 cwt., while in 1896 it was 5,076 cwt. Indian ruby is found to answer the purposes of furnace work better than the locally obtained mica.

Trade Notes.

Errata.—We wish to draw the attention of readers to the transposition of the *headings* of our Imports and Exports last week. The error was confined to the *headings* solely, and a slip is enclosed in this issue with the means, and full directions, for replacing the words "Imports" and "Exports" correctly.

Re-opening of Kynoch's Arklow Works.—Work has been resumed at Kynoch's explosives factory at Arklow, county Wicklow, which has been closed since early last month. This has enabled 300 hands to return to employment.

A Light Railway for Beckton.—The Board of Trade has recently confirmed an order entitled the Barking and Beckton Light Railway Order, 1898, authorising the construction of light railways in the county of Essex, between Barking Town and the Beckton Gas Works

The Purification of the Thames.—Since 1894, when the Conservators began the work, the Thames has been purified by one-third. Sir F. Dixon-Hartland, Chairman of the Conservators, states that, whereas in 1894 offences per day averaged 130, they were now reduced to an average of thirty-five.

Russian Oil.—Mr. Paul Dvorkovitz states that the proposed raising by the Russian Government of the freight for refined oil from Baku to Batum (whence chiefly the Russian oil is exported to European and other markets) from 12 kopecks to 19 kopecks per pood has been indefinitely postponed. Mr. Dvorkovitz has received this information from the editor of the official journal of the Russian Minister of Finance.

Directory of Papermakers.—We have just received a copy of this useful directory, for 1899. It is as usual well printed and arranged. In addition to the list of papermakers, which has been brought up to date, and the triple list of mills, a special feature is made of about 700 additional trade designations, used as watermarks, etc., in papers, bringing the total collection to over 2,600, which is of infinite value to printers and stationers. There is also a classification of advertisers, forming a directory of papermakers' principal engineers, purveyors of raw materials, paper mill suppliers, etc., etc. The price is 1/- (or 1/4 post free), from Messrs. Marchant, Singer & Co., 47, St. Mary Axe, London, E.C. A pocket edition is issued at 2/6.

Analytical Differences.—An interesting case came recently before the court at Lowestoft. John King, a Lipton's manager, was summoned for selling adulterated butter. The analysis produced by the prosecution indicated "butter 8c per cent., fats other than butter-fat 20 per cent." An analysis procured from Somerset House, and signed by G. Lewin and H. W. Davis, on the other hand, certified that "we are of opinion that the sample in question affords no evidence of the presence of fat other than butter-fat." Mr. G. Lewin said he analysed the sample with the assistance of Mr. Davis. He had been six years in his present position, and had had considerabie experience. The sample in this case was not a suspicious butter at all, and every figure obtained as a result of the various analyses confirmed the others. In his opinion there was no doubt but that the butter was pure. A third analyst said he had applied a variety of tests, and came to the conclusion that the butter was adulterated, while still another (the public analyst for Middlesex) gave it as his opinion that it was "highly probably adulterated." With these conflicting expert opinions, the court declined to make a conviction.

Illicit Commissions Bill—Some Difficulties.—According to the statement of a correspondent who had an interview with the manager to a large silk merchant in London, the trade is practically honeycombed by the practice of giving commissions to influence business. "I do not believe that it extends so much in the higher grades of business," he says "as in the lower. Where you get a highly intelligent class of men with exceptional technical skill, such as you find where very high-priced goods are handled, then you have men whose moral sense generally enables them to see the iniquity of the thing, and they are paid such high salaries as prevent them from indulging in anything of a shady nature. Besides that, it is often the heads of the firms themselves who conduct the buying operations in these lines, and naturally there is no temptation to them in the offering of a commission. It is when we deal with what I may call the mechanical classes that we find these commissions being paid. In one branch of the cotton trade, for instance, it is quite a common thing for a respectable firm to be told that it could not do business in it. Every man in the trade pays or takes a bribe, and you can't do business without it. No advance of wages would check the practice. If a firm were to attempt to put an end to it, it would simply be boycotted and its trade would vanish, so strong has the custom taken hold of the people engaged in the business. The employers know all about what is going on, and wink at it. In such cases what are you to do? No employer would prosecute a man, because he would inevitably lose his business."

Water Gas.—The report of the departmental committee on water gas has been under consideration by the Liverpool Health Committee. The town clerk said that the effect of the departmental committee's recommendation was the carrying out of what was suggested by the lighting committee of the Liverpool Corporation in March, 1898. The Health Committee would appreciate the position of the consumers in Liverpool, who received gas containing 18 per cent. of carbonic oxide, the most poisonous gas known. Several members insisted that immediate steps should be taken to secure a remedy from the gas company. A resolution was unanimously adopted that the local members of Parliament should be asked to press the Government to bring in a Bill to carry out the departmental committee's recommendations.

Interesting Case Under the Factory Act.—At Sale, on Tuesday, the Harris Advertising Balloon Company, having their headquarters in Manchester, but occupying premises at Broadheath, were summoned for employing two girls in a room in which bisulphide of carbon was used. Mr. R. Brown appeared for the defence. The prosecution was conducted by Miss Mary M. Paterson, one of her Majesty's Inspectors of Factories and Workshops, who visited the premises in December last and found the girls in a room in which balloons were being "dipped" in bi-sulphide of carbon, the fumes of which were very deleterious to health. The girls, who were under 18, stated that that was the first time they had been in the dipping-room, and that they had no right to be there. It was stated that the arrangements at the rooms had been sanctioned by the District Inspector of Factories. After a long hearing the bench decided by a majority to dismiss both cases.

The Manchester Sewage Scheme: The Cost.—At the meeting of the Rivers Committee held on Monday, Dr. Dreyfus, the deputy-chairman, presiding, the report of Mr. B. Latham, M.Inst.C.E., was received. In this report Mr. Latham says:—"I have carefully considered the question of the cost of the proposed bacteria beds for Manchester, consisting of sixty acres of such beds, with all necessary adjuncts for dealing with the sewage from six hundred thousand persons, together with the storm water. I may say that I am not able in the absence of the necessary surveys and detail drawings to give precise figures, but you may conclude that the cost of all these works will not exceed the sum of £300,000. I must remind you that the result of this expenditure will be to relieve the Corporation of Manchester from the large expenditure now incurred for chemically treating the sewage and save some other expenses in connection with the disposal of the sludge which now entail considerable annual outlay. That the proposed works will be successful, and relieve the Corporation of Manchester from all future embarrassment so far as the purification of the sewage is concerned there cannot be any doubt."

Market Reports.

TAR AND AMMONIA PRODUCTS.

There is practically no change in benzols, both qualities being quoted 8d. Carbolic acids are much about the same as regards price and prospect. Naphthas are dull, and solvent is easier. Creosote is firm, and grease oils have advanced. Pitch keeps very steady, and is disposed to advance; present values are 24s 6d. to 25s. f.o.b. East Coast, and 22s. 6d. West Coast.

Sulphate of ammonia seems to be reviving with the close of the month, and prices have once more turned in favour of sellers. Closing prompt values are:—Beckton £10. 2s. 6d., London (outside makes) £10. 2s. 6d. to £10. 3s. 9d, Hull £10. 1s. 3d. to £10. 2s. 6d., and Leith £10. 2s. 6d.

MISCELLANEOUS CHEMICAL MARKET.

Reports, generally, indicate that all works in the alkali trade are busy, and though there is no distinct improvement yet noticeable in prices, the tendency to further reductions seems to have been checked. This is to be expected if only on account of higher price of fuel, etc Caustic soda quotations are unchanged, viz: f.o.b. Liverpool, 77%, £7. 12s. 6d; 74%, £7 7s. 6d.; 70% £6. 17s. 6d.; 60%, £5. 17s 6d. nett. per ton, 10 ton lots. Bleaching powder steady, and good business doing at £4 5s. softwoods, f.o.r, and £5 to £5 5s hardwoods, f.o.b. Liverpool. Chlorates of potash and soda are unchanged in position and value, and ample supplies are offering at 3½d. and 3¾d. per lb. respectively. Alkali 58%, £3 17s. 6d. bags, f.o.r. Bicarbonate and soda crystals without alteration. Sulphur firm at £4. 11s. 3d. Saltcake in good request at 30s to 32s. 6d. per ton in bulk f.o.r. Sulphate of copper remains at £24. 10s., but business has been somewhat less active. Brown acetate of lime is lower at £5. c.i.f. for forward delivery. Grey firm at £7. 17s. 6d. per ton. Acetate of lead, white and brown, remains steady. Litharge rather lower at £16. 15s. per ton. Arsenic is quiet for home demand and easy for export, price firm at £16. 10s. Garston, &c. Aniline oil and salt are unchanged in value. For muriate of ammonia price is somewhat weak. Copperas is in good request. Borax firm at £16. to £16. 10s. Acetate of soda is in better demand, and price stands at £12. 10s. per ton. Acetic acids are quiet and without alteration in value. There is good demand for potash, caustic and carbonate, and prices are unchanged. Yellow prussiate of potash is rather easier at 7½d. to 7¾d. Sulphocyanides are quiet. Bichromates are unaltered. Tin and zinc salts are firmer.

REPORT ON MANURE MATERIAL.

The more suitable weather for agricultural operations is bringing forward orders for manures, but so far manufacturers are not increasing their stock of material. The Continent is again buying 77/80% Florida rock at the equivalent of 8¾d. per unit, c i.f., United Kingdom ports, but United Kingdom will not pay the price. The quotation for Tennessee rock remains 7d. per unit, and that for South Carolina at 6d. There is nothing doing in River Plate bones in the absence of available cargoes afloat. East Indian bone meal remains scarce on spot and the quotation is about £5. 7s 6d. per ton. For a parcel afloat £5. 5s. per ton, ex quay Liverpool, has been paid, but something under this would probably be accepted for February/March steamer shipment. Nitrate of soda has advanced to 7s. 9d. per cwt. for ordinary and to 8s. per cwt. for refined quality, on spot.

THE METAL MARKETS.

LONDON, Wednesday.—Pig iron firm: Scotch warrants closed at 54s. 9d.; Middlesbrough, 47s. 11d. cash; and hematite, 59s. 7d. Copper quiet: Chili bars, G.O.B.'s and G.M.B.'s, closed at £71. 17s. 6d. to £72. 2s. 6d. cash, and £71. 17s. 6d. to £72. 2s. 6d. three months. Tin firm: Straits closed at £108. 12s. 6d. to £109. 2s. 6d. cash, and £108. to £108. 10s. three months; Australian, £108. 12s. 6d.; English ingots, £112. Lead easy: Spanish, £14.; English, £14. 3s. 9d.; Silesian spelter, ordinary, £27. 17s. 6d. Nickel, 1s. 2½d. Antimony, £38. Quicksilver: First hands, £8. 5s.; second hands, £8. 4s. *Copper shares* quiet: Cape, 4 5/16 to 4 5/16; Copiapo, 3⅛ to 3¼; Libiola, 2 5/16 to 2 6/16; Mason and Barry, 3¾ to 4; Rio Tinto, 40¼ to 40⅜; Tharsis, 8 5/16 to 8⅜.

GLASGOW, Wednesday.—Market firm, and a fair business. Scotch done at 54s. 8½d., 54s. 9½d., 54s. 8½d., and 54s 9d. cash; also at 54s. 11½d. month; buyers, 54s. 9d. cash; sellers ½d. more. Cleveland done at 47s. 11d. to 47s. 10½d. cash, and 48s. 2d. to 48s. 1½d month; buyers, 47s. 11d. cash; sellers, ½d. dearer. Cumberland hematite done at 59s. 7d. to 59s. 7½d. cash, and 59s. 10d. month; buyers, 59s. 7d. cash; sellers, 59s 8d. Middlesbrough hematite idle.

LIVERPOOL OIL AND COLOUR MARKET.

Wednesday.

OILS.—Palm oil is very quiet and there is next to nothing doing, but prices keep fairly steady. Olive is firm with a fair business passing. Linseed is firmer. The price having advanced for Liverpool makes in export casks now stands at 19s. 3d. to 19s. 6d. Cottonseed steady, holders of Liverpool refined being firm at 16s. to 16s. 6d. Castor oil is in fairly good demand, but business has been checked somewhat by sellers advancing prices. Both good seconds Calcutta and first pressure French are quoted 2 1/16d. Tallow is in fair demand, and quotations are steady. Resin is moving quietly at recent rates. Spirits of turpentine are steady, being firmly held for 33s. per cwt., but the demand is rather slow. Petroleum quiet. American, 6⅝d. to 8d., and Russian refined 5¾d to 6⅜ d. per gallon.

CAKES.—There has been only a moderate inquiry for spot parcels of American Western linseed, and values are the turn in buyers' favour again at £6 10s. 0d., to £6. 17s. 6d. All other imported descriptions have a dull market at nominally unchanged rates, with buyers showing little or no inclination to operate in River Plate at £7. 6s. 3d. to £7 7s. 6d., in Bombay at £7. to £7. 10s., or in Russian at £7. 7s. 6d. per ton Liverpool makes continue to meet a fair inquiry, but the quotation is reduced partially 5s., the range being now given at £8. to £8. 10s. per ton, according to brand. Good to choice brands of American decorticated cottonseed move off quietly at £5. 15s. to £6., according to quality, but the market is now steady thereat, whilst Liverpol makes are in moderate demand at £6. 7s. 6d. to £6. 15s. per ton, according to brand. For undecorticated Liverpool makes holders still ask £4. 15s to £5. 5s., according to brand, and there is a very fair business doing on this basis, and the quay having been cleared of the cheaper lots of the recent arrivals of Egyptian, the tone is a shade steadier, with a fair inquiry, and sellers asking £4. 7s. 6d. to £4. 10s. per ton for prime quality.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—Business here taken collectively may be described as fair, but in the oil and allied trades it is quiet. The continued scarcely of seed—a situation largely created by seed merchants, otherwise importers, to their own advantage, in enhanced prices all round—makes buyers timorous. The Hull and Barnsley Railway Company continues to show an improvement, the total traffic receipts for the six weeks of the year being £41,668., against £39,634 a year ago, being an increase of £2,034. the value of the shares now reaching £58. to £58. 10s. Linseed is firm, in sympathy with which is linseed oil, being quoted firm 17s. 9d. spot, naked; March/April, 17s. 3d.; May/August, 16s. 4½d; last four months, 16s.; boiled and refined £1. to £1. 10s. per ton extra. Cottonseed remains steady and firm, in sympathy with which is cotton. seed oil, refined, which is quoted steady, 13s. 6d. naked, spot; 13s 9d. to April; 14s. 3d. May/August; crude ditto is quoted 12s. 6d. spot, naked; casks, £1. and ordinary barrels, £1. 10s. per ton extra. Castor oil, cold drawn pharmaceutical, 28s. in barrels, 3⅜d. per lb. in cases; first pressure, 25s. in barrels, 2⅞d. per lb. in cases; second pressure, 24s in barrels, 2¾d. per lb. in cases. Olive oil, not much offering, being quoted firm £32. per tun. Olive oil soap, to arrive, being quoted £16. Turpentine, 33s. 3d. per cwt. Cod oil, £16. to £18. per ton. Resins unchanged Oleines from £19 per ton and firm.

CAKES.—The passing season has been a very unsatisfactory one from a seed-crusher's point of view. Many mills, which at present should have been working night and day, are only badly employed. Linseed cakes are steady, 95% pure, £8. to £8 2s. 6d.; oil cakes, £6. 17s. 6d. to £7. per ton; Russians, £7. 5s. to £7. 15s. Cotton cakes firmer, best makes, £5. to £5. 2s. 6d.; seconds, £4 17s. 6d. to £5. per ton; decorticated, £6. 10s.; Rape cakes, Black Sea, £4. 2s. 6d.; East India, £4 10s. per ton.

PAINTS.—The season opens with every prospect of good business. Prices are unchanged and leads are firm.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

Within the past few days sulphate of ammonia has picked up a little bit and now fetches £10. 2s. 6d. for prompt Leith. According to all accounts the lowest touched during the late persistent descent was £10. 1s. 3d., though early last week less was spoken of as probable. There is nothing going on at present for forward delivery. The meeting in London last week of producers of solid paraffins and the makers of candles had for result the raising of the price of the latter by 3d. per dozen lbs. This brings the figure (common brand) up to 3s., and the candle-making industry will be rather better off than during last season. The new contracting is now just beginning. Solid paraffins themselves are unchanged in price but continue healthy, as are most of the products of the mineral oil industry. Burning oil particularly has been in urgent call at contract prices. Sulphate of copper is again dearer at £24 10s. General chemicals retain the late partial improvement at prices unchanged.

Chief prices current are:—Soda crystals, £2. 7s. 6d. to £2. 12s. 6d. nett, Tyne; soda ash, £4. 2s. 6d. to £4. 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 5s. to £4. 15s. nett, Glasgow; caustic soda, white, 74° £7. 7s. 6d, 70/72° £6. 17s 6d., 60/62° £6., and cream 60/62° £6., all nett, Liverpool; bleaching powder, 35/37°, £5. to £5. 10s. nett, Tyne; saltcake, 30s od.; borax, English refined, £16., and boracic acid, £26. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s.. nett, Liverpool; bichromate of potash, 3½d., less 6% for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d., less 6% for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow); chlorate of potash, 3½d, less 5% Liverpool; nitrate of soda, 7s. 6d. to 7s. 9d.; sulphate of ammonia, £10. 2s. 6d. prompt f.o.b. Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £24. 10s., less 5% Liverpool; paraffin scale, hard, 1⅞d. to 2d. per lb., and soft 2d. per lb.; paraffin wax, 120° semi-refined, 2¼d. to 2½d. per lb; paraffin spirit (naphtha), 9d. to 10d. per gal; paraffin oil (burning), No. 1, 6½d.; and crystal, 7d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 15s. to £5. 5s., 885° £5. 10s. to £6., and 890/895° £6. 5s. to £6. 10s. Week's imports of sugar at Greenock were *nil*.

TYNE CHEMICAL REPORT.

TUESDAY.

Chemicals are quiet and there is nothing new to report as to prices. Bleaching powder is steady, at £5. 5s. per ton. Soda crystals are £2. 12s. 6d. per ton, gross weight locally. Caustic, 70%, £7., and 76/77%, £7. 15s. to £8. per ton. Sulphur scarce at £4. 15s. per ton, nett.

Bleaching powder, softs, £5. 5s. per ton, nett; do., hards, £5. 10s. per ton, nett; caustic soda, 76/77%, £8. and 70%, £7. 0s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do, 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75°Tw., £2. 12s. 6d. per ton, nett; do., 100°Tw., £3. per ton, nett; do., 140°Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. 0d. per ton, nett; blanc fixe, £6. 10s. per ton nett; chloride of barium, refined crystals, £6. 15s. 0d. per ton, nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt firm at 9s. 6d. per ton, f.o.b. Tees.

COALS.—Trade continues fairly good and steam coals are very firm at 10s. 9d. to 11s. per ton for best qualities. Bunker and gas coals are rather quieter. In coke the tone of the market is decidedly firmer, the demand being extremely heavy for home consumption. To-day's prices are:—Best Northumbrian steam, 10s. 9d. to 11s. per ton; second qualities, 9s. 9d. to 10s. per ton; small steam 4s. 9d. to 5s. per ton; gas coals, 10s. to 11s. per ton; bunker coals, 8s. to 8s. 6d. per ton; household coals, 10s. to 11s per ton; coke firm, 18s. 6d. to 21s. per ton.

New Companies.

Abbot's Salt Works, Ltd.—CAPITAL £10,000. in £1. shares. This company has been formed to acquire and carry on Aman's Middlewich Salt Works, at Middlewich, Cheshire, and to adopt an agreement with A. C. Padgett. The first directors are A. C. Padgett (chairman and managing director with £250. per annum and 5 per cent. of the net profits) and A. W. Johanning (deputy chairman and managing director with £150. per annum and 5 per cent. of the net profits).

Crown Quay Cement Works, Ltd.—CAPITAL £17,500. in £1. shares. This company has been formed to acquire and carry on the business of cement, lime and plaster of Paris manufacturers recently carried on by F. Resher and Co. (Sittingbourne), Ltd., at Crown Quay Cement Works, Sittingbourne, Kent, and to adopt an agreement with H. J. Woodrow. The subscribers to the memorandum of association are:—J. W. Mash, 163, Buckingham Palace-road, S.W., cement merchant; W. Tudor, 17, College Hill, E.C., merchant; C. Gardiner, 17, College Hill, E.C., clerk; A. C. Bure, 7, Lamb's Conduit-street, W.C., clerk; H J. Woodrow, 97, Guilford-street, W.C., builder; C. Kinns, 176, Milkwood-road, Herne Hill, S.E., clerk; H. J. Howes, 43, Woodberry Grove, Finsbury Park, N., clerk.

H. May and Co., Ltd.—CAPITAL £2,000. in £5. shares. This company has been formed to acquire the business of H. May and Co., and to manufacture washing powders. The number of directors is not to be less than three nor more than seven; the first are S. O. H. Collins, F. J. Warren and R. H. Douglass; remuneration as fixed by the company. Registered office, 15, Fakenham-street, Goodinge-road, N.

Mica Boiler Covering Co., Ltd.—CAPITAL £75,000. in £1. shares (37,500 preference). This company has been formed to adopt agreements with the Mica Boiler Covering Co., Ltd., and with H. C. Mitchell, and to manufacture, sell and deal in mica, mica waste, flake mica, Mitchell's mica boiler covering, silicate wool, asbestos, etc The subscribers to the memorandum of association are:—P. A. Makins, 1, Lowther Gardens, Kensington, manufacturer; J Graham, 24, Coleman-street, E.C, solicitor; C. R. Triton, 36, Queen's Gate, S.W., engineer; L. S. Roberston, 28, Victoria-street, S.W., engineer; W. M. Mordey, 82, Victoria-street, S.W., electrical engineer; W. C. Mitchell, 24, Old Broad-street, E.C., manufacturer; J Doig, 24, Old Broad-street, E.C., accountant. Registered office, 24, Old Broad-street, E.C.

Gazette Notices.

PARTNERSHIP DISSOLVED.

J. MAYON and H. MAYON, chemists, drysalters, oilmen, Birmingham, under the style of James and Henry Mayon, so far as regards H. Mayon.

BANKRUPTCY ACTS, 1883 and 1890.

Adjudication.

KENT, ALF, Bristol, manure works manager.

IMPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending February 11th.

Acetic Acid—
Holland, 94 pks. Capes & Self
" 20 Beresford & Co.
Germany, 30 Argo S. S. Co.
Holland, 70 H. Lorenz
" 125 A. & M. Zimmermann

Acetic Lime—
U. States, 707 bgs. H. Wallace & Co.

Acetone—
Holland, 2 cks. T. H. Lee

Acid—
Holland, 94 pks Soundy & Sons

Alum—
Holland, 450 pks. J. White
Germany, 10 Butler's Wf., Ld.

Aluminium Sulphate—
Germany, 70 cks. H. Wallace & Co.

Alumita—
Germany, £35 R. W. Greeff & Co.

Antimony Ore—
Turkey, 12 t. J. R. Francis & Co.
France, 1 Girard Fréres & Co.
Spain, 20 Novelli & Co.
A. Turkey, 126 Union L. Co., Ld.

Barium Hydrate—
Germany, 36 cks.

Barytes—
Belgium, 1,015 pks. O'Hara & Hoar
Holland, 24 "
Germany, 38 J. L. Lyon & Co.
" 57 Wilkinson & Co.
Holland, 79 W. Harrison & Co.

Bleaching Powder—
France, 144 cks. J. M. Steel & Co.

Bone Meal—
E. Indies, 100 t. Hollinghurst & Co.
" 50 Matthews & Luff
" 50 A. E. Piggott
" 250 Vokins & Co., Ld.

Caoutchouc—
U. States, 3 c. Hale & Son
France, 32 Girard Bros & Co.
Straits, 60 Prop. Bull Wf.
" 80 Anderson, Weber & Smith
" 421 L. & I. D. Jt. Co.
Rangoon, 4 Prop. Hay's Wf.
P. E. Africa, 20 L. & I. D. Jt. Co.
Sydney, 4 McIlwraith, McEacharn & Co.
U. States, 1 L. & I. D. Jt. Co.
Chili, 2 F. W. Bowyer & Co.
" 1 Prop. Bull Wf.
Germany, 4 Major & Field

Castor Oil—
France, 20 brls. F. Bochin
Italy, 20 cs. M. D. Co.
France, 15 pks. C. Tennant, Sons & Co.
Belgium, 70 brls. C. & E. Morton
Italy, 55 cs. City Chem. Wf. Co., Ld.

Caustic Potash—
Germany, 183 dms. J. M. Steel & Co.

Chemicals (*otherwise undescribed*)
France, £37 Mory & Co.
Germany, 21 T. Palmer
" 25 J. W. Drysdale & Co.
Holland, 7 T. H. Lee
Germany, 300 Craven & Co.
" 4 Butler's Wf., Ld.
Denmark, 80 Crosse & Blackwell Ld.
Holland, 35 Hernu, Peron & Co., Ld.
Germany, 936 L. & I. D. Jt. Co.
" 11 H. & J. Dutfield
Belgium, 54 John Cockerill Line
" 20 C. Atkins & Nisbet
Germany, 40 H. Lambert
U. States, 460 B. & F. Wf. Co., Ld.
Germany, 7 Brit. Anti-Fouling Comp. Co.
Belgium, 210 T. Palmer
" 10 Major & Field
Holland, 52 L. C. & D. Rly. Co.
" 28 H. & J. Dutfield
" 340 H. Harkness
" 17 Phillipps & Graves
Germany, 8 F. Smith
" 888 100 c. A. & M. Zimmermann

Cream of Tartar—
France, 16 pks. F. C. Devon & Co.
" 20 W. C. Bacon & Co.
" 15 B. & F. Wf. Co., Ld.
" 4 C. Christopherson & Co.
Spain, 2 B. & F. Wf. Co., Ld.
" 3 Evans, Tescher & Co.

Disinfectants—
Germany, £19 A. & M. Zimmermann

Dried Blood—
U. States, 200 t. E. Groschke

Dyestuffs—
Aniline
Holland, 7 pks L. C. & D. Rly. Co.
Argols
Italy, 271 pks. Thames S. T. & L. Co., Ld.
" 9 Fellows, Morton & Co., Ld.
Cochineal
Canary Is., 98 pks. W. M. Smith & Sons
" 5 Sperling & Williams
Cutch
U. States, 650 pks. H. A. Litchfield & Co.
" 100 Elkan & Co.
" 956 Brown & Elmslie
Rangoon, 75 "
" 250 H. A. Litchfield & Co.
" 950 Phillipps & Graves
Singapore, 15 Borneo Co.
Extracts
France, 45 pks. B. & F. Wf. Co., Ld.
U. States, 36 L. & I. D. Jt. Co.
" 40 W. C. Barnes & Co., Ld.
France, 366 T. H. Lee
" 50 L. J. Levinstein & Sons
Gambier
Straits, 328 pks. Leach & Co.
" 750 Brinkmann & Co.
Indigo
E. Indies, 97 chts. J. Hatton, Hall & Co.
" 27 Darling Brs.
" 25 E. Bower & Co.
" 26 Elkan & Co.
" 96 J. Karpeles & Co.
" 14 Kaltenbach & Schmitz
" 35 Ralli Brs.
" 119 Lon. & Til. Ltge. C. & D. Co., Ld.
Italy, 6 L. & I. D. Jt. Co.
" 11 pks. Montgomerie & Workman
Belgium, 3 cs. John Cockerill Line
Bengal, 309 pks. 410 chts P. & O. Co.
E. Indies, 95 chts. "
U. States, 12 srns. L. & I. D. Jt. Co.
E. Indies, 61 chts. Parsons & Keith
" 25 J. W. Cook & Co. Ld.
" 34 464 pks. A. B. Curtis & Co.
" 34 J. Kenyon & Sons
" 7 Dipnall & Co.
" 14 T. Barlow & Bro.
" 14 Thomasset & Co.
" 95 L. & I. D. Jt. Co.
Holland, 5 A. E. Piggott
Myrabolams
E. Indies, 363 pks. Hoare, Wilson & Co.
Italy, 1,170 Baxter & Hoare
" 924 L. & I. D. Jt. Co.
E. Indies, 2,053 W. Shelcott & Sons
Orchella
Portugal, 38 pks. Prop. Bull Wf.
Saffron
Spain, 11 pks. J. Knill & Co.
" 1 Major & Field
Shumac
Italy, 600 pks. J. Kitchen, Ld.
" 50 A. E. Pigott
" 150 H. K. Daniels
" 1,000 J. W. Cook & Co., Ld.
Tanners Bark
Natal, 17 t. A. & W. Nesbitt
N. Zealand, 15 G. H. Penney & Co.
Natal, 20 Bullard, King & Co.
Tumeric
E. Indies, 70 pks. L. & I. D. Jt. Co.
Valonia
A. Turkey, 30 t. M. D. Co.
" 129 Anning & Cobb
" 247 A. & W. Nesbitt

Farina—
Holland, 200 pks. J. Barber & Co.
France, 60 H. Ewald & Co.
Holland, 50 J. Knill & Co.
" 400 R. Bennett & Co.
Belgium, 5 John Cockerill Line
Germany, 10 J. Lang, Son & Co.
U. States, 75 Wingate & Johnston

Glucose—
U. States, 500 pks. — cwts. Pearce Pelly & Co.
Germany, 35 cks. 281 Deering & Robottom
U. States, 50 pks. 294 C. & E. Morton
" 120 540 L. Norman & Co., Ld
" 2 6 L. & I. D. Jt. Co.
" 1,590 5,880 R. G. Hall & Co.
" 249 249 Trier.
" 100 500 Ohlenschlager Brs.
" 100 500 Lucas & Spencer's Wf., Ld.
Germany, 13 271 c.
" 20 cks. M. D. Co.

Glue—
Italy, £310 Anderson, Becker & Co.
France, 106 J. W. Cook & Co., Ld.
Germany, 15 L. & I. D. Jt. Co
U. States, 184 Armour & Co.
Belgium, 9 Leach & Co.
" 53 J. E. Kitton

Glue Stock—
Belgium, 9 brls. Hicks, Nash & Co.

Gutta Percha—
Belgium, 83 c. T. H. Lee
" 58 C. Webster
Straits, 510 Prop. Bull Wf.
" 100 Anderson, Weber, & Smith
" 160 Soundy & Sons
" 750 W. H. Jewsbury & Co.

Gypsum—
Germany, 20 t. Brasch & Rothenstein

Lead Acetate—
Germany, 47 cks. F. Bochin
Holland, 49 pkg. J. Owen
" 26 Burrell & Co.

Litharge—
Germany, 20 pks. H. Wallace & Co.

Manganese Ore—
Germany, 6 t. Butler's Wf., Ld.

Manure—
U. States, 8 t. A. R. Davis & Co.
Canary Is., 3 West & Penrose

Methyl Alcohol—
Germany, 20 dms. W. Lizard
U. States, 80 H. Wallace & Co.
Norway, 3 cks. T. Jones & Co

Mica—
U. States, £225 W. M. Smith & Sons
E. Indies, 1,350 "

Molasses—
U. States, 200 brls. 1,250 c. J. Forsey
" 103 cks. 608 J. W. Cook & Co., Ld.
Holland, 300 brls. 1,800 J. R. Francis & Co., Ld.

Ochre—
France, 47 pks. J. L. Lyon & Co.
" 30 Ellam, Jones, & Co.
Holland, 3 Phillipps & Graves
Belgium, 5 t. "

Paraffin Wax—
U. States, 300 brls. Lon. & Til. Ltge. C. & D. Co.
" 3,046 Anglo-American Oil Co.
170 cs.

Phosphate of Lime—
Belgium, 200 t. Anglo-Contl. Guano Works
" 400 West & Penrose
France, 24 Temperley Transporter Co.

Phosphate Rock—
Belgium, 240 t. D. de Pass & Co.

Phosphates—
U. States, 3,200 t. Lawes Chemical Manure Co.

Potassium Carbonate—
Belgium, 100 c. F. Smith
Germany, 154 H. Lambert

Potassium Cyanide—
France, 30 cs. J. Owen

Potassium Sulphate—
France, 50 bgs. Charles & Fox
" 50 W. E. Cole
Germany, 500 Anglo-Contl. Guano Works

Red Oxide—
Persia, 1,500 t. M. Dk. Co.

Ripolin—
Holland, 33 pks. Phillipps & Graves

Rosin—
France, 3 brls. B. & F. Wf. Co., Ld.
" 12 R. James & Co.

Salicylic Acid—
Holland, 3 pks. Phillipps & Graves

Saltpetre—
E. Indies, 1,038 bgs. Perkins & Homer
" 2,010 Lucas & Spencer's Wf.
Germany, 4 cks. T. H. Lee
" 75 J. Hall & Son, Ld.
" 280 bgs. H. Grey, junr.
" 350 S. E. Rly. Co.
" 20 cks. Petri Brs.

Smalts—
Germany, 7 pks. Butler's Wf., Ld.

Soap—
U. States, £300 May, Roberts, & Co

Soda—
Holland, 200 c. Little & Johnston

Soda Crystals—
Holland, 200 c. W. Pope & Co.
" 12 cs. Hernu, Peron, & Co.

Sodium Hypochlorite—
Germany, 350 cs. H. Lambert

Sodium Hyposulphite—
Germany, 9 cks. Deering & Robottom

Sodium Nitrate—
Germany, 19 cs. H. Lambert
Chili, 2,640 bgs. W. Montgomery & Co.

Sodium Prussiate—
Belgium, 16 cks. J. Owen

Starch—
Holland, 61 pks. Phillipps & Graves
" 1,000 D. R. Wallis
Belgium, 96 F. Claydon & Co.
" 220 Becker & Wagner
" 110 Sawer, Sons, & Co.
" 110 Taylor Brs.
" 132 Leach & Co.
" 800 E. & T. Pink
France, 20 J. Barber & Co.
" 30 L. Meldelsohn
" 160 F. Claydon & Co.
" 61 W. E. Cole
U. States, 150 Beck & Pollitzer
" 160 L. & I. D. Jt. Co.
Austria, 25 M. Dk. Co.
Germany, 25 Argo S. S. Co.

Stearine—
France, 250 bgs. H. Hill & Sons
Belgium, 63 "

Sulphur—
Italy, 10 t. Typke & King
" 37 G. Boor & Co.
" 11 F. C. Devon & Co.
" 5 J. Puddy & Co.
Holland, 5 Phillipps & Graves

Superphosphates—
Belgium, 50 t. Chemical Works

Tallow—
Brisbane, 775 cks. Goad, Rigg, & Co.
" 250 Phillipps & Graves
Sydney, 36 Deering & Robottom
" 9 J. R. Sydney & Co.
U. States, 620 brls. Price's Patent Candle Co.
" 60 trcs. Hoare, Wilson, & Co.
Holland, 15 cks. Lucas & Spencer's Wf.
" 3 brls. Phillipps & Graves
Lyttelton, 20 cks. J. R. Francis & Co.
N. Zealand, 84 N. M. & A. Co
" 32 N. Z. L. & M. A. Co.
" 3 Hicks, Nash & Co
" 20 J. Greig
" 37 Low, Sons, & Bedford
" 6 J. Graves
" 25 Brown & Elmslie
" 3 Culverwell, Brooks, & Co.
France, 93 bgs. Orient Co., Ld.

Tar—
Germany, 100 brls. W. Beard & Son
Russia, 31 R. S. Hill & Co.

Tartar—
Italy, 135 pks. B. Jacob & Sons
" 36 Howards & Sons

Tartaric Acid—
Italy, 3 pks. Andorsen, Becker, & Co.
Holland, 12 Kirkpatrick, Barr, & Co.

Ultramarine—
Holland, 45 pks. Thames S. T. & L. Co., Ld.
" 4 t. Becker & Wagner
Germany, 12 pks. J. Kitchin, Ld.

Varnish—
U. States, 100 brls. Atlantic Transport Co.
" 13 pks. Pinchin, Johnson, & Co
Germany, 9 Butler's Wf., Ld.
France, 3 Mory & Co.

Verdigris—
France, 20 cks. B. & F. Wf. Co., Ld.

Waste Salt—
Germany, 10 t. Perkins & Homer

White Lead—
Germany, 23 pks. Soundy & Sons
" 8 H. Lambert
Holland, 58 Burrell & Co.
" 67 Randall Brs.
Belgium, 37 J. L. Lyon & Co.
" 16 G. E. Banes
" 31 Burrell & Co.
" 55 T. & W. Farmiloe, Ld.

Wood Pulp—
Sweden, 320 pks. Alsing & Co., Ld.
" 1,200 W. G. Taylor & Co., Ld.
" 250 Tough & Henderson
" 244 Erith & Dartford L. Co.
Germany, 406 W. Friedlaender
" 45 Hernu, Peron, & Co.
Norway, 394 John-en & Jorgensen
" 400 W. E. Bott & Co
U. States, 153 Henderson, Craig, & Co.
" 228 W. G. Taylor & Co., Ld.
Holland, 51 C. S. Lovell
Belgium, 1,978 J. Harrison

Zinc Oxide—
Germany, 500 pks. Soundy & Sons
" 149 M. Ashby, Ld.
U. States, 100 "
Holland, 20 R. W. Greeff & Co.
" 86 J. Matton
" 20 J. Owen
" 50 Burrell & Co.
France, 50 J. R. Francis & Co.

LIVERPOOL.

Week ending February 9th.

Alumina Sulphate—
Ghent, 100 bgs.

Antimony—
Valparaiso, 248 bgs.

Barytes—
Rotterdam, 23 cks.

Bones—
Alexandria, 300 bgs. 118 t.
Beyrout, 76
Valparaiso, 1 cs. C. Weiss & Co.

Borax—
Valparaiso, 37 sks. Hainsworth Watson

Caoutchouc—
Valparaiso, 82 bls. J. H. Schroeder & Co.

Castor Oil—
Calcutta, 357 cs. Ralli Bros.
" 400

Chalk—
Hamburg, 5 cs.

Citric Acid—
Messina, 12 cks.

Colours—
Hamburg, 8 cs.
Rotterdam, 4 cks. 20

Cottonseed Oil—
New York, 30 cs. Dempster & Co.
" 100 brls.
Ch'l'stown, S.C. 100

Cream of Tartar—
Bordeaux, 46 cks.

Dyestuffs—
Argols
Patras, 7 brls. S. A. Acratopulo
Extract
Nantes, 600 cks. R. J. Francis & Co.
Rotterdam, 30
Bordeaux, 100
St. Nazaire, 300 "
Gambier
Singapore, 3,886 bls. E. Boustead & Co.
" 424 bgs. Paterson & Simons
" 6,178 105 bls.
Indigo
Calcutta, 567 chts.

Dyewood Extract—
Philadelphia, 30 brls.

Farina—
Fiume, 250 bgs.
Stettin, 50

Glucose—
New York, 100 brls. T. M. Duche & Sons
Boston, 100

Glue—
New York, 1 brl Diamond Match Co.
Philadelphia, 20 bgs. Liverpool W'hsg. Co.
Rotterdam, 3 bgs. 100 cs.
St. Nazaire, 41 cks.

Glycerine—
Marseilles, 14 dms.

Lead Acetate—
Rotterdam 16 cks.

Lithopone—
Rotterdam, 60 cks.

Oak Extract—
Fiume, 509 brls.

Ochre—
Marseilles, 4 cks.

Paraffin Wax—
Philadelphia, 100 brls.
New York, 899 Anglo-American Oil Co.

Phosphates—
Ghent, 3,600 bgs.
Brunswick, 1,310 t.
Ghent, 500 bgs. Animal Products Co

Pitch—
Boston, 8 brls. Am. B & S. Mch Co., Ld.

Potash—
Rotterdam, 21 cks.

Pyrites—
Huelva, 1,950 t. Matheson & Co.

Pyrogallic Acid—
Hamburg, 5 cs.

Resin—
Charleston, 588 brls.

Salt—
Hamburg, 445 t.

Saltpetre—
Hamburg, 195 kgs.

Shumac—
Palermo, 650 bgs.

Soap—
N'port News, 100 bdls. & cs.
Bordeaux, 310 bgs. Geo. G. Blackwell, Sons & Co.
Boston, 5 cs. Evans, Sons & Co.
Marseilles, 37
Genoa, 200
Bari, 184

Soda—
Philadelphia, 5 cks.

Starch—
New York, 2 brls. Ferguson & McRay
Rotterdam, 50 cs.

Sulphur—
Catania, 34 cks. 116 brls. 430 bgs.

Tallow—
New York, 315 tcs.
Boston, 233 397 brls. 7 hds.
Sydney, 734 cks.
Alexandria, 52 Morris, Meyers & Co.
New York, 560 tcs. Colby & Co.
Campana, 200 cks

Tartar—
Naples, 2 cks.

Tartaric Acid—
Bordeaux, 10 cks.
Rotterdam, 10 sks.

Ultramarine—
Rotterdam, 20 cks. 5 cs.

Valonia—
C'stantinople, 1,000 bgs. Jivan Tekean
Syra, 170 L. S. Dusunaras & Co.
" 585 C. Nicolaidi

White Lead
Rotterdam, 64 cks.

Wood Pulp—
Hamburg, 40 bls.

Zinc Oxide—
Genoa, 15 cks.

Zinc White—
Rotterdam, 75 cks.

MANCHESTER.

Week ending February 11th.

Acetic Acid—
Rotterdam, 10 btls.

Acetone—
Hamburg, 8 dms.

Aluminium Oxide—
Hamburg, 1 ck.

Aniline Salt—
Rotterdam, 27 cks.

Antimony Salt—
Hamburg, 2 cks.
Rotterdam, 20

Barytes—
Antwerp, 18 cks.

Caustic Lye—
Hamburg, 20 cks.

Caustic Potash—
Hamburg, 21 dms.
Treport, 41

Chalk—
Rouen, 2 cs.
Treport, 4

Chemicals *(otherwise undescribed)*
Rotterdam, 6 cks. 1 cs.

Ceresin—
Hamburg, 12 brls.

Colours—
Antwerp, 3 cks
Hamburg, 9 17 cs.
Rotterdam, 231 52 15 brls.

Dyestuffs—
Extracts
Rotterdam, 14 cks. 4 cs.
Indigo
Rotterdam, 15 cs. 1 chst.

Glue—
Antwerp, 3 cks.
Christiania, 100 bgs. Felber, Jucker, & Co.
Hamburg, 5
Rotterdam, 40 100 brls.
Rouen, 4 cks. 40 bls. 1 pk.
Treport, 8

Lead Acetate—
Rouen, 50 cks.

Lithopone—
Rotterdam, 4 cks.

Phosphates—
Ghent, 250 t.

Potash—
Hamburg, 10 cks. 30 dms
Treport, 21

Potassium Carbonate—
Treport, 4 cks.

Potassium Prussiate—
Rouen, 2 cks.

Salt—
Rotterdam, 100 bgs.

Soap—
N. Orleans, 340 brls.

Soda Crystals—
Rouen, 9 cks.

Sodium Fluoride—
Hamburg, 2 cks.

Starch—
Antwerp, 80 cs.
Hamburg, 240
Rotterdam, 90

Stearine—
Antwerp, 13 bgs.

Tan Extract—
Rouen, 17 cks.

Tannic Acid—
Hamburg, 7 cs.

Tannin—
Hamburg, 3 cks.

Tartar Emetic—
Hamburg, 14 cks.
Rouen, 2

Tartaric Acid—
Rouen, 5 cs.

Ultramarine—
Hamburg, 2 cks.

Wood Pulp—
Christiania, 1,558 bls. Felber, Jucker, & Co.
Gothenburg, 708 "
Skien, 1,141 "
Rotterdam, 104 pks.

Zinc Oxide—
Rotterdam, 125 brls.

Zinc Sulphide—
Hamburg, 40 cks.

Zinc White—
Rotterdam, 20 cks.

HULL.

Week ending February 11th.

Acetate of Lime—
New York, 201 bgs. Wilson, Sons, & Co., Ld.

Alizarine—
Rotterdam, 63 pks. Hull & Netherlands S. S. Co.

Barytes—
Antwerp, 77 cks. Bailey & Leetham, Ld.
" 100 Wilson, Sons, & Co., Ld.
Bremen, 19
Rotterdam, 49 Hull & Netherlands S. S. Co.

Bone Meal—
Bombay, 2,067 bgs.
Riga, 415

Castor Oil—
Leghorn, 5 cs.

Chemicals *(otherwise undescribed)*
Amsterdam, 1 cs. Hull & Netherlands S. S. Co.
Antwerp, 16 cks. Wilson, Sons, & Co., Ld.
Dunkirk, 88
" 9 dms.
Leghorn, 32 cks.

Colours—
Antwerp, 45 pks. Wilson, Sons, & Co., Ld,
Bremen, 12 cks. Veltmann & Co,
" 2 cs.
Marseilles, 88 cks.
Rotterdam, 160 42 cs. 28 pks. Hull & Netherlands S. S. Co.

Cryolite—
Copenhagen, 3 cks. Wilson, Sons & Co., Ld.

Dyewood—
Antwerp, 25 bls. Wilson, Sons, & Co., Ld.
Hamburg, 20 bgs. "

Farina—
Amsterdam, 100 bgs. Wilson, Sons, & Co., Ld.
Harlingen, 250 bls. "
" 150 W. Gilyott & Co.
Stettin, 148 bgs.

Glucose—
New York, 500 bgs. 310 brls.
Rotterdam, 40 bgs. Hull & Netherlands S. S. Co.

Glue—
Dunkirk, 36 cks.
Rotterdam, 10 cs. Hull & Netherlands S. S. Co.

Indigo—
Rotterdam, 6 brls. Hull & Netherlands S. S. Co.
6 cs.

Lead Acetate—
Riga, 25 brls. Wilson, Sons, & Co., Ld.

Linseed Oil—
Amsterdam, 12 brls. Hull & Netherlands S. S. Co.

Lithopone—
Hamburg, 8 cks. Wilson, Sons, & Co., Ld.

Molasses—
N. Orleans, 100 brls.

Myrabolams—
Bombay, 11,576 bgs.

Phosphates—
Bougie, 900 t.
Ghent, 152

Pitch—
Antwerp, 4 cks. Wilson, Sons, & Co., Ld.

Potash—
Hamburg, 21 dms. Bailey & Leetham, Ld.

Salt—
Rotterdam, 4 cks. Hull & Netherlands S. S. Co.

Soap—
Bari, 5 cs. Wilson, Sons, & Co., Ld.
Marseilles, 5 dms.
Naples, 46 cs. ,,

Starch—
Amsterdam, 20 cs. Hull & Netherlands S. S. Co.
Antwerp, 308 Bailey & Leetham, Ld.
Bremen, 969 Veltmann & Co.
Ghent, 178 Wilson, Sons, & Co., Ld.

Stearine—
Antwerp, 38 bgs. Wilson, Sons, & Co., Ld.

Shumac—
Palermo, 700 bgs. Wilson, Sons, & Co., Ld.
,, 100
Trieste, 36 brls. ,,

Sulphur—
Catania, 30 bgs. Wilson, Sons, & Co., Ld.
,, 40 t.
,, 500 bgs.

Tallow—
Dunkirk, 100 cks. Wilson, Sons, & Co., Ld
New York, 85 trcs. ,, 80 brls. ,,

Tartaric Acid—
Rotterdam, 4 cks. Hull & Netherlands S. S. Co.

Ultramarine—
Rotterdam, 2 cks. Hull & Netherlands S. S. Co.

Waste Salt—
Hamburg, 150 bgs. Bailey & Leetham, Ld.
,, 508

White Lead—
Amsterdam, 87 cks. Hull & Netherlands S. S. Co.
Antwerp, 45 Bailey & Leetham, Ld.
Rotterdam, 82 Hull & Netherlands S. S. Co.

Wood Pulp—
Bergen, 57 bls. Wilson, Sons, & Co., Ld.
Christiania, 1,492 pks. ,, 38 bdls. ,,
Drontheim, 511 bls. ,,
Gothenburg, 1,098 ,,
,, 90
Hango, 498 J. Good & Sons
,, 131

Zinc Oxide—
Antwerp, 75 cks. Bailey & Leetham, Ld.
New York, 50 brls.

Zinc White—
Rotterdam, 40 cks. Hull & Netherlands S. S. Co.

GLASGOW.

Week ending February 16th.

Acetate of Lime—
Philadelphia, 524 bgs.

Alizarine—
Rotterdam, 54 cks. J. Rankine & Son
2 brls.

Aluminium—
Rouen, 6 cs.

Aniline Colour—
Hamburg, 5 cks.

Antimony Sulphide—
Hamburg, 1 ck.

Barium Chloride—
Rotterdam, 4 cks. J. Rankine & Son

Barytes—
Rotterdam, 292 pks. J. Rankine & Son

Bone Meal—
Rouen, 200 bgs.

Castor Oil—
Leghorn, 15 cs.

Chemicals *(otherwise undescribed)*
Hamburg, 1 ck. 3 cs.

Colours—
Rotterdam, 25 cks. 3 cs. J. Rankine & Son; 9 bxs. 50 brls. ,, ; 58 pks. ,,
Hamburg, 2 cks.

Dyestuffs—
Aniline
Rotterdam, 5 cks. J. Rankine & Son
6 cs.
Extracts
Rouen, 9 cks.
Logwood
Hayti, 500 tcs.

Glucose—
Portland, 50 brls.
New York, 300

Glue—
Rotterdam, 20 bgs. J. Rankine & Son
Hamburg, 4 cks. 20 bgs.
Rouen, 101 cks. 5 cs. ,, 40 bgs. 12 bls. ,,

Molasses—
N. Orleans, 560 brls. W. McLay
,, 7,501

Ochre—
Rouen, 73 cks.

Paraffin Wax—
Baltimore, 110 brls.

Phosphates—
Fernandina, 2,210 t. A. Cross & Son, Ld

Rosin—
New York, 100 brls.

Shumac—
Palermo, 625 bgs. 6 bls.

Soap—
New York, 25 cs.

Starch—
Rotterdam, 12 cks. J. Rankine & Son
New York, 600 sks.

Tallow—
Philadelphia, 210 tcs.

Tartar—
Bordeaux, 16 cks.

Tartaric Acid—
Rotterdam, 7 cks. J. Rankine & Son

Varnish—
Amsterdam, 1 cs. J. Rankine & Son
New York, 49 brls. 3 cs.

Waste Salt—
Hamburg, 200 bgs.

White Lead—
Rotterdam 50 pks. J. Rankine & Son
1 ck.

Wood Pulp—
St. John, 2,465 bls.
Drontheim, 80
Christiania, 1,028

Zinc Oxide—
New York, 40 brls.
Rotterdam, 50 cks. J. Rankine & Son

Zinc White—
Rotterdam, 25 cks. J. Rankine & Son
25 pks.

TYNE.

Week ending February 11th.

Barytes—
Rotterdam, 100 bgs. Tyne S. S. Co.

Chemicals *(otherwise undescribed)*
Amsterdam, 1 cs. W. Swanston & Sons

Colours—
Antwerp, 3 cks. Tyne S. S. Co.
Hamburg, 1 cs. ,, 3 cks. ,,

Copper Sulphate—
Amsterdam, 8 cks. W. Swanston & Sons

Paint—
Trondhjem, 1 ck. P. H. Matthiessen & Co.

Soap—
Rotterdam, 7 cs. Tyne S. S. Co.

Soda—
Hamburg, 12 cks. Tyne S. S. Co.

Starch—
Antwerp, 112 cs. Tyne S. S. Co.
Rotterdam, 138 ,,

Stearine—
Antwerp, 19 bgs. Tyne S. S. Co.
Rotterdam, 14 ,,

White Lead—
Antwerp, 20 cks. Tyne S. S. Co.

Wood Pulp—
Christiania, 83 bls. P. H. Matthiessen & Co.
Trondhjem, 63 bdls. ,,

Zinc Oxide—
Antwerp, 20 brls. Tyne S. S. Co.
Rotterdam, 40 cks. ,,

GOOLE.

Week ending February 8th.

Alizarine—
Rotterdam, 62 cks. 18 cs.

Alkali—
Calais, 7 cks.

Aniline—
Rotterdam, 161 cks. 20 cs.

Antimony—
Boulogne, 1 ck.

Caoutchouc—
Boulogne, 15 cks.

Colours—
Ghent, 1 cs.
Hamburg, 3

Dyestuffs *(otherwise undes.)—*
Amsterdam, 6 cks. 3 cs.
Boulogne, 113 16 pks.
Rotterdam, 113 23

Dyestuffs—
Bark
Antwerp, 60 bgs.

Dyewood Extract—
Hamburg, 80 bgs.

Farina—
Delfszyhl, 700 bgs.
Hamburg, 330

Glue—
Antwerp, 15 bgs.
Boulogne, 3 cks.
Rotterdam, 60 bgs.

Glycerine—
Hamburg, 4 dms.

Phosphates—
Ghent, 808 bgs.

Potash—
Antwerp, 2 cks.
Calais, 13 dms.
Hamburg, 20

Saltpetre—
Hamburg, 29 cks.
Rotterdam, 100 bgs.

Silicate Soda—
Rotterdam, 4 cks.

Tartaric Acid—
Rotterdam, 3 cks.

Varnish—
Boulogne, 10 cks.

GRIMSBY.

Week ending February 11th.

Caoutchouc—
Antwerp, 2 cs. 6 bs.
Hamburg, 6
Rotterdam, 1

Chemicals *(otherwise undescribed)*
Antwerp, 1 ck.
Hamburg, 1 bg. 6 cs. ; 14 cks.

Colours—
Antwerp, 10 cks. 93 pks.
Hamburg, 13 55 cs. 6 dms. 99 pks.
Rotterdam, 20 bgs.

Glue—
Hamburg, 6 cks.

Indigo—
Rotterdam, 18 cs.

Pitch—
Dieppe, 10 cks.

Salt—
Hamburg, 491 bgs.

Varnish—
Antwerp, 19 cs.

EXPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending February 15th.

Acids—
E. London, 10 cks. £26
Cape Town, 11 pks. 16

Alkali—
Hong Kong, 16 c. £6

Ammonia—
Cape Town, 6 cs. £80
Rio de Janeiro, 3 30

Ammonium Carbonate—
Rouen, 5 t. 10 c. £130

Ammonium Muriate—
Melbourne, 1 t. 4 c. £21

Ammonium Sulphate—
Ostend, 80 t. £840
Las Palmas, 1 12
Ghent, 75 788
Dunkirk, 150 1,538
Rotterdam, 150 1,500
Antwerp, 105 1,065

Arsenic—
Amsterdam, 10 cks. £38

Bleaching Powder—
Durban, 1 t. 10 c. £15

Borax—
Townsville, 4 cks. £19
Rotterdam, 25 38
Fremantle, 7 t. 118
E. London, 1 10 c. 103
Durban, 18 45

Carbonic Acid Gas—
Channel Is., 20 tubes £11
Lisbon, 4 cs. 100

Caustic Potash—
Townsville, 11 c. £30

Caustic Soda—
Napier, 5 t. 4 c. £37
Townsville, 1 10
Smyrna, 12 7
Durban, 16 15
Hong Kong, 10 15

Chemicals *(otherwise undescribed)*
Bombay, 2 cs. £16

Hong Hong, 1 15
Hamilton, Ont., 25 cks. £61
Gibraltar, 2 13
Adelaide, 2 pks. 16
Sydney, 4 21
Lyttelton, 4 17
Brussels, 10 kgs. 1 109
Durban, 4 11 68
Montreal, 16 dms. 26
B. Ayres, 24 15
Cologne, 5 brls. 65
Hamburg, 5 1 ck. 72
Stettin, 7 41
Teneriffe, 187 bgs. 110
Bordeaux, 19 cks. 39
Perth, 6 cs. (pt.) 15
Paris, 30 210

Citric Acid—
Lisbon, 5 cks. £31
Amsterdam, 2 60
Townsville, 3 cs. 12
Fremantle, 10 kgs. 65
Colombo, 2 10
Melbourne, 10 c. 63
Wellington, 3 21
Rotterdam, 3 22
Genoa, 2 t. 247

Coal Products—
Alizarine
Boston, 3 cks. £45
Aniline
Christchurch, 1 cs. £11
Aniline Oil
Rotterdam, 10 dms. £280
Anthracene
Cologne, 228 cks. £311
Benzine
Wellington, 20 dms. £10
Benzol
Rotterdam, 2 dms. £15
Carbolic Acid
Trinidad, 15 dms. £12
Cologne, 48 cks. 192
New York, 25 55
Marseilles, 15 36
Creosote
Bordeaux, 1,310 cks. £1,310
Naphtha
Melbourne, 20 dms. £20
Adelaide, 48 pks. (pt.) 6
Perth, 15 14
Naphthaline
N. Orleans, 88 cks. £76
New York, 177 56 bgs. 183
Montreal, 58 57
Hamburg, 9 80
Cologne, 12 105
Pitch
Antwerp, { 42 cks. / 1,193 t. } £1,535
Dunkirk, 320 400
Aviles, 380 557
Madeira, 3 cks. 6
Alexandria, 100 brls. 35
Tar
Trinidad, 5 cks. £7
Auckland, 50 dms. 11
Teneriffe, 6 rnlts. 14
Durban, 50 8

Copperas—
Cape Town, 27 t. 9 c. £50

Copper Sulphate—
Antwerp, 14 c. £9
Naples, 81 t. 5 1,891
Bordeaux, 201 7 4,396
Catania, 5 118
Genoa, 32 10 756
Galatz, 16 15
Alexandria, 1 9 20
Paris, 5 1 91

Cream of Tartar—
Santos, 7 c. £24
Melbourne, 2 t. 10 187
Durban, 3 12
Napier, 10 38

Disinfectants—
Alexandria, 33 cs. (pt) £24
Delagoa Bay, 92 pks. 121
Fremantle, 4 cs. 12
Perth, 8 12
Newcastle, 20 30
Hamburg, 15 cks. 60
Antwerp, 25 75
New York, 77 264
Sydney, 5 40
Durban, 5 200 96
Penang, 50 dms. 13

Glycerine—
New York, 16 t. 12 c. £1,630

Manure—
Channel Is., 65 t. £432
Lyttelton, 4 15 c. 178
Havre, 25 80
Rouen, 48 110
Malaga, 70 560
Bordeaux, 77 10 297
Jersey, 10 1 62

Nitric Acid—
Channel Is., 28 crbys. £49

Oxalic Acid—
Syra, 4 cks. £30

Potash—
Alexandria, 5 c. £9

Potassium Cyanide—
Halifax, 10 cs. £117
Auckland, 6 t. 510
Fremantle, 3 350
E. London, 6 41
New York, 40 410
Perth 1 15 c. 170
Delagoa Bay, 10 50 cs. 1,577

Salammoniac –
Galatz, 6 c. £9
Batoum, 20 brls. 65
Lisbon, 3 cs. 30
Amsterdam, 1 ck. 10
Constantinople, 5 t. 145

Saltpetre—
Bahia, 2 t. 14 c. £61

Sheep Dip—
Pt. Elizabeth, 14 t. 10 c. £483
E. London, 1,000 dms. 100
Rouen, 2 5
B Ayres, 30 18 2,800 cs. 7,495

Soda—
Rotterdam, 5 t. 9 c. £30
Napier, 1 6
B. Ayres, 2 3 79
Cape Town, 12 10

Sodium Bicarbonate—
Hornolislu, 7 c. £6

Sodium Carbonate—
Townsville, 1 t. 4 c. £9

Sodium Hyposulphate—
Pt. Elizabeth, 1 t £6

Sodium Prussiate—
Antwerp, 5 t. 4 c. £236

Strontium Nitrate—
Calcutta, 1 t. 10 c. £50

Sulphur—
Pt. Elizabeth, 25 kgs. £9
E. London, 1 t. 7
Sulphuric Acid—
Singapore, 100 dms. £108

Superphosphates –
Jersey, 20 t. £54
Fremantle 25 81
Bordeaux, 15 30

Tartaric Acid—
Melbourne, 10 c. £55
Lyttelton, 1 7
Hamburg, 1 t. 116

LIVERPOOL.

Week ending February 15th.

Alkali—
Seville, 16 t. 18 c. £70
Salonica, 11 1 3 q 45
Brisbane, 2 17 16
Melbourne, 9 15 85
Adelaide, 18 6 88

Alum—
Galatz, 9 t. 14 c. 3 q. £49
Ibrail, 2 10
Bahia, 2 17
Penama, 2 14
Brisbane, 1 7
B. Ayres, 1 17 3 10
Alexandria, 6 10 33
Cape Town, 15 1 4
M. Video, 2 3 1 10
Smyrna 16 19 78

Aluminous Cake—
Calcutta, 25 t. 16 c. 2 q. £200

Ammonium Carbonate –
Santos, 11 c. £16
Havana, 17 23
Gothenburg, 2 t. 6 3 q. 73
Brisbane, 13 15

Ammonium Chloride—
Hamburg, 5 c. £7

Ammonium Muriate—
Smyrna, 10 c. £10
Batavia, 19 17

Ammonium Sulphate—
Bordeaux, 5 t. £53
St. John, 10 102
Las Palmas, 79 8 c. 850
Cullera, 352 10 2,597
Philadelphia, 50 10 68
Valencia, 9 15 101
Genoa, 11 15 120
Newport News, 60 16 616
New York, 50 19 522
Gd. Canary, 13 13 1 q. 142

Basic Slag—
Kingston, 1 t. £6

Bleaching Powder—
Antwerp, 26 cks.
Bombay, 150 cs
Boston, 392
Calcutta, 20
Cleveland, 20
Corfu, 15 20 brls.
Genoa, 164
Ghent, 75
Gothenburg, 43
Leghorn, 18
Milwaukee, 141
Newport News, 78
New York, 85 70 bxs.
Philadelphia, 126
Rio de Janeiro, 12 cs.
Rouen, 18
Venice, 30

Bone Ash—
Gothenburg, 59 bgs.

Bones—
Antwerp, 10 t 15 c. £45

Boracic Acid—
Antwerp, 1 t £26
St. John, N.B., 2 17 c. 75

Borax—
Havana, 4 t. 11 c. £71
Melbourne, 3 3 57
Rotterdam, 93 1 302
Zolo, 11 3 q. 13
Antwerp, 29 9 3 427
Vera Cruz, 1 4 2 20
Halifax, 1 16
Bremen, 3 2 2 53
Copenhagen, 9 3 7
St. John, 11 12 3 198
Sydney, 1 14
Perth, W. A., 1 14
E. London, 30 cks. 38
Adelaide, 5 2 6
Brisbane, 1 t 18

Calcium Chloride—
New York, 11 t. £24
Gibraltar, 1 17 c. 4

Carbolic Acid—
Rouen, 5 t. £303
Amsterdam, 1 t. 1 c. 66
Osaka, 3 16 1 q. 182
Hiogo, 3 1 2 151
Rotterdam, 5 14 100

Caustic Potash—
Sydney, 3 t. 2 c. £90
San Francisco, 6 7 145

Caustic Soda—
Acajutla, 33 dms.
Alexandria, 115
Adelaide 6 brls.
Amsterdam, 67
Antwerp, 40
Barcelona, 260 94 cks.
Bilbao, 18
Bombay, 90
Braila, 190
Brisbane, 15 pks.
Calcutta, 106
Cape Town, 10 cs.
Cincinnatti, 50
Constantza, 156
Dunkirk, 35
Fiume, 16
Genoa, 108
Gibraltar, 12
Hiogo, 234
Jaffa, 80
Johannesburg, 11
Leghorn, 18
Libau, 10
Madrid, 100
Marseilles, 131
Melbourne, 213 15 bxs. 45
Messina, 45
M. Video, 89
New York, 400 25
Piræus, 30
Pretoria, 51
Rangoon, 10
Rio de Janeiro, 8
Rotterdam, 46
Roubaix, 30
Salonica, 18
Saltillo, 122
Santos 20
Sao Paulo, 90
Seville, 47
Sousse, 50
Sydney, 33
Talcahuano, 20
Tampico, 395
Toronto, 35
Valencia, 30 20 cks.
Vera Cruz, 95
Wellington, 20

Chemicals *(otherwise undescribed)*
Havana, 1 t. 5 c. £89
Delagoa Bay, 3 320
New York, 8 1 216
Karachi, 1 1 38
Vera Cruz, 1 110
Odessa, 2 51
Stettin, 3 98
Habana, 11 5 2 q. 39
Cartagena, 1 1 2 9
Townsville, 5 85
Bombay, 11 19
M. Video, 21 1 59

China Clay—
Baltimore, 255 t. 7 c.
Barcelona, 600 bgs.
Bombay, 350 cks.
Boston, 1,546
B. Ayres, 80
Calcutta, 375
Leghorn, 1,485 bgs.
New York, 202 cks.
Philadelphia, 200

Coal Products—
Aniline Colours
Cairo, 2 kgs.
Genoa, 5 pks.
Hamburg, 1 ck.
Mazagan, 1 cs.
New York, 16 cks. 1 bx.
Philadelphia, 2
Aniline Oil
Genoa, 5 dms.
Rouen, 5
Aniline Salt
Barcelona, 6 cks.
Genoa, 22 brls.
Piræus, 20
Rouen, 2
Creosote Oil
Bordeaux, 700 cks.
Creosote Salts
Philadelphia, 26 t. 10 c. £75

Copperas—
Bahia, 5 c. £7
B. Ayres, 1 t. 8 3

Copper Sulphate—
Lisbon, 25 t. 3 c. £461
Algiers, 2 1 40
Naples, 135 15 3 q. 2,648
Leghorn, 209 3 2 3,745
Venice, 275 8 3 5,107
Brindisi, 7 16 150
Trieste, 30 2 437
Callao, 3 11 64
Bordeaux, 802 15 2 16,665
Galatz, 34 19 650
Rouen, 86 5 3 1,318
Genoa, 291 4 5,601
Pyrgos, 4 17 89
Zante, 4 2 2 82
Cette, 154 5 2 3,244
Piræus, 2 1 45
B Ayres, 1 18
Palermo, 9 17 166
Halifax, 1 6 26
Nantes, 11 1 3 182
Bayonne, 9 16 187
Pernambuco, 10 12
Paris, 4 9 1 117
Lille, 5 2 118
Messina, 5 3 108

Disinfectants—
Sydney, 2 t. 4 c. 2 q. £65
Para. 5 8
Pt. Elizabeth, 1 7
Bahia, 2 5

Dried Blood—
Dunkirk, 50 t. 18 c £346

Ferro Sodium—
Rangoon, 10 c. £5

Fluor Spar—
Baltimore, 23 t. 10 c. £100

Glycerine—
Newcastle, 9 c. 3 q. £26
Valparaiso, 5 t. 246
Melbourne, 1 52

Guano—
Malaga, 39 t. 16 c. £280

Magnesia—
Alicante, 50 cs.
Bordeaux. 25 bgs.
Constantinople, 1
Genoa, 1
Havana, 7
Paris, 100
San Juan, 1
Vera Cruz, 5

Magnesium Chloride –
Singapore, 20 dms.

Magnesium Sulphate—
Bahia, 2 kgs.
Pernambuco, 39 bgs.
Rio de Janeiro, 25 brls.
M. Video, 6 c. 3 q. £7
Manure—
B. Ayres, 1 4 c. 2 q. £37
Gd. Canary, 19 198
Teneriffe, 24 19 90
Naphtha—
Melbourne, 74 dms.
Oxalic Acid—
Lisbon, 1 ck. £10
Paint—
Accra, 4 kgs. 20 dms.
Antofagasta, 18 cs.
Axim, 9
B. Ayres, 35 cks.
Cadiz, 10 dms.
Calcutta, 195 44
Cabera, 77 13
Callao, 185
Cardenas, 3 cks.
Cartagena, 60
Genoa, 3 pks.
Havana, 11 cks.
Iquitos, 3
Las Palmas, 60
Lisbon, 20 dms.
Nassau, 60 8 cks.
Porto Alegre, 5
Rangoon, 18 45 dms.
Rio G. do Sul, 2 cks.
St. John's, 50
San Juan, 2
Santo Marta, 35 dms.
Shanghai, 80
Sierra Leone, 111
Smyrna, 4 cks.
Tampico, 6
Teneriffe, 12
Tuticorin, 10
Vera Cruz, 135
Painters' Colours—
Antwerp, 20 pks. 8 cks.
B. Ayres, 9 3
Bremen, 400 bgs.
Calcutta, 100 kgs. 1 cs. 26
Candia, 7 pks.
Canea, 122
Cape Town, { 101 5 / 11 kgs. 6 brls.
Christiania, 15
Copenhagen, 9 cs. 20
Genoa, 32
Gothenburg, 55 bgs. 15
Hamburg, 100 5
Havana, 1
Kansas, 3
Leghorn, 50
Mayaquez, 4 brls.
Newport News, 700
New York, 1 2 cs.
Para, 40 kgs
Ponce, 2
Porto Novo, 2
San Juan, 3 1
Santiago de Cuba, 5 2
Paraffin Wax—
Barcelona, 30 bgs.
Boston, 50 cs.
Cape Town, 30
Gijon, 20
Leghorn, 30
Palermo, 10
Pasages, 10
Patras, 40
Salonica, 10
San Sebastian, 50
Trieste, 15
Phosphorus—
B. Ayres, 1 t. 9 c. £160
Hiogo, 90 cs. 855
Monterey, 3 c. 24
M. Video, 7 40
Shanghai, 14 cs. 115
Picric Acid—
Antwerp, 1 t. £94
Haren, 20 kgs.
Pitch—
Antwerp, 126 t.
Rouen, 1 16 c.
Potassium Bicarbonate—
Bilbao, 1 t. 5 c. 3 q. £37
Potassium Bichromate—
Cairo, 4 c. £6
Potassium Chlorate—
Addevalla, 5 t. £161
Batavia, 1 10
Copenhagen, 1 10 c. 45
Foochow, 6 6 189
Gothenburg, 11 334
Hamburg, 1 2 31
Hiogo, 26 580
Libau, 10 314
Melbourne, 60 cks. 92
Monterey, 1 t. 12 3 q. 50
New York, 2 10 75
Philadelphia, 5 10 165
Sydney, 5 152
Vera Cruz, 1 30
Potassium Prussiate—
Genoa. 1 t. 9 c. 2 q. £87
Potassium Silicate—
Amsterdam, 2 t. 11 c. £20
Pottasium Stannate—
Bombay, 2 t. 2 c. £115
Rosin—
Rio de Janeiro, 2 brls.
Salammoniac—
Bilbao, 1 t. £33
Dedeagatch, 4 cks. 16
Galatz, 10 c. 16
Genoa, 2 t. 5 73
Melbourne, 4 10 102
Naples, 1 31
Smyrna, { 6 cks. / 12 101
Salt—
Accra, 2,000 bgs.
Algiers, 17 t. 17 c.
Anamaboe, 100 bgs.
Antwerp, 75 t.
Axim, 10
Baltimore, 200
Bordeaux, 6 brls.
Boston, 150 12 cs.
Brisbane, 248
C. C. Castle, 10 c.
Cape Town, 1,100 bgs.
Conakry, { 500 / 20 t. 5 c. } 1,368 sks.
Copenhagen, 244 300 cs.
Degama, 44
Lagos, 100
Lahou, 11
Landana, 12 10 c.
Manaos, 15 12
N. Orleans, 600
New York, 230
Normanton, 50
Para, 255 11
Philadelphia, 10
Pt. Elizabeth, 8 19
Pt. Natal, 5
Rangoon, 802
Rio de Janeiro, 100 cs.
Rosario, 200
Rouen, 10
Salt Pond, 50
Trinidad, 7 3 c.
Valparaiso, 3 11
Winnebah, 17 10
Salt Cake—
Antwerp, 150 t. £193
Hong Kong, 2 19 c. 8
New York, 5 13 85
Terneuzen, 200 8 250
Saltpetre—
Gd. Canary, 3 t. 3 c. 3 q. £68
Halifax, 1 21
Para, 4 19 91
Pernambuco, 16 396
Sheep Dip—
B. Ayres, 14 t. 15 c. £412
Calcutta, 100 dms. 50
Cape Town, 900 129
Chicago, 4 13 65
Soap—
Accra, 500 bxs. 1 cs.
Aden, 125 bdls.
Alexandria, 20
Algiers, 1,000
Algoa Bay, 610
Anamaboe, 110
Axim, 501
Baltimore, 2
Barbadoes, 1,300 1
Barberton, 60
Bathurst, 100
Bayin, 505
Bombay, 1,242 22
Bonny, 500
Boston, 10 cks.
B. Ayres, 7 71
Buguma, 150
Calcutta, 75 250 bdls.
C. C Castle, 450
Cape Town, 1,676 25
Cardenas, 21
Chama, 200
Conakry, 320
Christiania, 315 15
Delagoa Bay, 20
E. London, 2,376 2
Gibraltar, 40
Gd. Bassam, 20
Half Jack, 20
Halifax, 300
Hamburg, 20
Johannesburg, 50
Karachi, 3
Ladysmith, 12
Lahou, 50
Madras, 10 61
Malta, 30 1
Manaos, 1,030
Marseilles, 5
Monrovia, 35
Montreal, 1,100
Mossel Bay 500 10
Oporto, 10
Para, 1,000 1 100
Pt. Elizabeth, 500
Pt. Natal, 5 13
Rangoon, 610 2
Rotterdam, 238
St. John's, 53
St. Lucia, 260
Salt Pond, 230
San Juan del Sur, 120
Sassandra, 30
Savannah la Mar, 50
Savanilla, 6
Sierra Leone, 210 2
Surinam, 680
Tangiers, 40
Trinidad, 1,200
Valparaiso, { 10 kgs. / 50 bxs. } 2 pks.
Wimburg, 10
Winnebah, 50
Soapstone—
Oporto, 30 bls.
Soda Ash—
Antwerp, 1,250 bgs
Barcelona, 20 cks.
Boston, 26 tcs. 14
B. Ayres, 104
Calcutta, 950 kgs. 200
Genoa, 100
Ghent, 150 bgs.
Gothenburg, 100 40
Leghorn, 50
Libau, 400 10
New York, 120 91 114
Oporto, 4
Puerto Cabello, 12
Rio de Janeiro, 120 brls.
Rio G. do Sul, 50
Rotterdam. 18 6
San Francisco, 285
Tampico, 200
Toronto, 320
Trieste, 100
Venice, 150
Windsor Mills, 320
Soda Crystals—
Amsterdam, 12 brls.
Calcutta, 33 kgs.
Madras, 25
Malta, 100
New York, 140 cks.
Sodium Bicarbonate—
Alexandria, 30 kgs.
Alicante, 105 2 cks.
Amsterdam, 40 5 brls.
Antwerp, 10
Barbadoes, 20 20
Barcelona, 95 14
Bilbao, 60 4
Bombay, { 100 bgs. / 1,076 kgs.
Brisbane, 950
Boston, 140
Calcutta, 1,450
Cartagena, 60
Delagoa Bay, 20 bgs.
Galatz, 25 kgs. 67
Genoa, 20 4 cs.
Halifax, 25
Ibrail, 34
Libau, 195
Madras, 246
Malta, 12 dms.
Maryborough, 96
Mombasa, 25
Montreal, 2 cks.
Pasages. 80
Rio de Janeiro, 50
Rockhampton, 100
Rotterdam, 40
Rouen, 30 10
Smyrna, 105
Talcahuano, 25
Tampico, 20
Trinidad, 60
Sodium Bichromate—
Hamburg, 40 kgs.
Sodium Carbonate—
Calcutta, 12 brls.
New York, 70
Sodium Chlorate—
Boston, 50 kgs.
Newfairwater, 4 cks.
Rouen, 100 kgs.
Sodium Hyposulphite—
Antofagasta, 100 cks.
Seville, 20 crbys.
Sodium Silicate—
Bombay, 10 brls.
Callao, 5
Starch—
Copenhagen, 6 cks.
Nantes, 3 hds.
Rio de Janeiro, 18 brls.
Smyrna, 27 pks.
Stearine—
Rotterdam, 36 cks.
Strontia—
Hamburg, 10 t. 5 c. £113
Sulphur—
Boston, 100 t. 4 c. £428
Calcutta, 6 28
Ghent, 6 26
New York, 18 7
Para, 2 10 21
Portland, 100 1 426
St. John's, 100 1 425
Superphosphates—
Alicante, 30 t. £85
Bordeaux, 49 4 c. 1 q. 91
Las Palmas, 30 64
Malaga, 30 85
Oporto, 23 55
Valencia, 535 1 3 1,343
Tar—
Galatz, 215 brls.
Ibrail, 100
Para, 20
Pernambuco, 20
Savanilla, 12
Varnish—
Bogota, 11 cs.
B. Ayres, 1
Cape Town, 1
Genoa, 60 pks.
Las Palmas, 1
Melbourne, 1 ck. 22 2 dms
New York, 4
Paris, 3
Santa Marta, 1
Seville, 1
White Lead—
Porto Alegre, 100 kgs.
Tampico, 12 pks.
Zinc Chlorate—
Huelva, 1 t. 2 c. 3 q. £17
Zinc Chloride—
Bombay, 2 t. 18 c. £37
New York, 9 15 133

MANCHESTER.

Week ending February 15th.

Ammonium Carbonate—
Malmo, 3 cks.
Aniline Oil—
Belgium, 1 dm.
Germany, 10 tins 10
Aniline Salt—
Belgium, 5 brls.
Germany, 12 cks.
Caustic Soda—
Beyrout, 12 dms.
Bombay, 3 cks.
Chemicals (*otherwise undescribed*)
Alexandria, 110 cks.
Beyrout, 50 brls.
Cologne, { 15 kgs. / 2 cks.
Creosote Oil—
Amsterdam, 5 cks.
Glue—
Germany, 24 brls.
Holland, 12 cks.
Saxony, 5
Glycerine—
Germany, 10 crbys.
Linseed Oil—
Beyrout, 13 brls.
Jaffa, 2
Painters' Colours—
Beyrout, 1 kg.
Paint—
Jaffa, 30 kgs.
Paraffin Wax—
Hamburg, 3 cs
Pitch—
Belgium, 252 t. 6 c.
Potassium Bichromate—
Alexandretta, 20 brls

Rosin—
Beyrout, 12 brls.
Salammoniac—
Beyrout, 10 cks. 10 brls.
Soap—
Alexandria, 100 cs.
Beyrout, 3 cks.
Bombay, 23
Soda Ash—
Beyrout, 8 brls.
Sodium Chlorate—
Germany, 2 cks.
Tallow—
India, 51 brls.
Tar—
Belgium, 10 brls.
Toluol—
Germany, 30 dms.
Yarnish—
Jaffa, 2 cs.
Zinc Chloride—
India, 4 brls.
Zinc White—
Jaffa, 3 cks.

HULL.

Week ending February 11th.

Ammonium Sulphate—
Antwerp, 500 bgs.
Bombay, 75
Genoa, 696
Ghent, 300
Leghorn, 200
Marseilles, 300
Odessa, 985
Basic Slag—
Helsingborg, 483 t.
Bleaching Powder—
Bombay, 40 dms.
Boston, 126 cks.
Borax—
Danzig, 1 brl.
Caustic Soda—
Bari, 35 dms.
Chemicals *(otherwise undescribed)*
Amsterdam, 10 cks.
Antwerp, 25
Bergen, 2 cs.
Christiania, 5 333 slbs.
Copenhagen, 1
Danzig, 9
Genoa, 26 119 pks.
Ghent, 1
Gothenburg, 7
Hamburg, 42
Leghorn, 20
New York, 149 10
Odessa, 89
Reval, 1 2
Rotterdam, 56
Rouen, 40
Trieste, 23
Venice, 20
Cottonseed Oil—
Amsterdam, 74 t. 16 c.
Antwerp, 21 2
Bremen, 5 5
Christiania, 1 15
Copenhagen, 1 13
Dunkirk, 15
Ghent, 5
Hamburg, 8 3
Marseilles, 3 3
Rotterdam, 48 13
Rouen, 5 5
Creosote—
N. Orleans, 3,245 cks.
Dyestuffs *(otherwise undescribed)*
Reval, 3 cs.
Rotterdam, 1 ck.
Stettin, 60 bgs.
Guano—
Dunkirk, 65 t.
Linseed Oil—
Bombay, 32 t. 13 c.
Christiania, 13 12
Copenhagen, 7
Drontheim, 18
Ghent, 7
Hamburg, 3 12
Rotterdam, 6 7
Stavanger, 1 1
Manure—
Dunkirk, 158 t.
Naphtha—
Marseilles, 10 cks.
Paint—
Antwerp, 42 cks.
Bombay, 7
Painters' Colours—
Amsterdam, 14 cks. 1 cs.
Antwerp, 41 8 99 dms.
Bombay, 641 159 10
Christiania, 40
Copenhagen, 7 1 pk.
Danzig, 17
Drontheim, 40
Genoa, 5
Ghent, 1 31 dms.
Fiume, 3
Hamburg, 45
Karachi, 62 54
Leghorn, 1
New York, 85
Rotterdam, 10 2 3 pks.
Rouen, 4
Stettin, 5
Pitch—
Antwerp, 267 t. 24 bls.
Dunkirk, 220
Soap—
Karachi, 3 dms.
Reval, 1 cs.
Stearine—
Trieste, 58 brls.
Tallow—
Hamburg, 26 cks.
Tar—
Amsterdam, 5 cks.
Antwerp, 30
Harlingen, 25
Varnish—
Amsterdam, 2 cs.
Antwerp, 2 cks. 2
Bombay, 85 dms.
Fiume, 2
Hamburg, 2

GLASGOW.

Week ending February 16th.

Ammonium Sulphate—
Cheribon, 30 t.
Cullera, 50 17 c. 2 q.
Forne del Mar, 260 14
France, 260 10
Genoa, 106 19 3
Italy, 60 12 1
Valencia, 476 15 1
Bleaching Powder—
Calcutta, £645
Boracic Acid—
Hiogo, £40
Borax—
Rotterdam, £19
Coal Tar—
Bombay, £87 10s.
Calcutta, 623
Karachi, 25
Madras, 70 11
Penang, 50
Rangoon, 32 8
Colours—
Boston, £36
Copperas—
Bombay, £125
Calcutta, 41 10s.
Madras, 30
Creosote Oil—
Boston, £10
France, 260
Dyestuffs *(otherwise undescribed)*
Amsterdam, £5
Dyestuffs—Logwood
Brisbane, £30 11s.
Portugal, 31 10
U.S.A., 92 18
Glycerine—
U.S.A., £895
Gutta Percha—
Amsterdam, £19
Iodine—
Rotterdam, £260
Lead Acetate—
U.S.A., £26
Linseed Oil—
Rockhampton, £34
U.S.A., 12 c. 3 q.
Magnesium Sulphate—
Christiania, £31
Muriatic Acid—
Bombay, £52 10s.
Nitric Acid—
Bombay, £541 11s.
Paint—
Brisbane, £466
Natal, 178
Singapore, 49
Painters' Colours—
Calcutta, £387
Colombo, 97
Havana, 396
Karachi, 53
Malta, 92 19s.
Oporto, 39
Rangoon, 47
Rockhampton, 80
Paraffin Wax—
Antwerp, £60
Barcelona, 140
Fiume, 479
France, 47
Italy, 760
Milan, 20
Naples, 40
Penang, 37
Trieste, 20
Pitch—
Amsterdam, 241 t. 4 c.
Calcutta, £66
Madras, 26
Potassium Bicarbonate—
Antwerp, £37
Barcelona, 502
Genoa, 566
New York, 788
Red Lead—
Natal, £38
Rosin—
Calcutta, £42
Salt—
Brisbane, 204 t. 10 c.
Soap—
Bombay, 4 t. 1 c.
Shanghai, 1 2
Sodium Bicarbonate—
Antwerp, 4 t. 3 c. 1 q.
Barcelona, 2 2
Genoa, 10 3
New York, 1 12
Sulphuric Acid—
Bombay, £327
Karachi, 580
Madras, 260 15s.
Rangoon, 318
Superphosphates—
Penang, 50 t.
Valencia, 9 17 c. 1 q.
Tallow—
Italy, 15 t. 15 c. 3 q.
Tar—
France, £242
White Lead—
Transvaal, £81 15s.

TYNE.

Week ending February 11th.

Alkali—
Amsterdam, 29 t. 7 c. 3 q.
Christiania, 6 12 1
Reval, 11 11 3
Rotterdam, 15 9 2
Ammonia—
Barcelona, 2 t.
Aluminium Sulphate—
Hamburg, 80 t.
Antimony—
Antwerp, 3 t. 12 c.
Christiania, 1
Hamburg, 5 1
Reval, 59 1 1 q.
Barium Binoxide—
Rotterdam, 5 t. 8 c. 3 q.
Bleaching Powder—
Amsterdam, 22 t. 19 c. 1 q.
Antwerp, 76 4 3
Christiania, 15 2
Drontheim, 10 4 3
Hamburg, 15 5 2
Oporto, 4 19
Rotterdam, 21 19 3
Bones—
Dunkirk, 13 t. 1 c. 2 q
Caustic Soda—
Aalborg, 4 t. 7 c. 3 q.
Antwerp, 19 13
Bergen, 1 9
Christiania, 4 7
Hamburg, 2 18
Reval, 19 5
Rotterdam, 2 18 2
Creosote Oil—
Christiania, 1 t. 1 c. 2 q.
Lead Acetate—
Christiania, 3 t. 11 c. 2 q.
Oporto, 16 2
Litharge—
Antwerp, 4 t. 3 c. 2 q.
Christiania, 11 3
Copenhagen, 1 6 1
Hamburg, 1 5 3
Magnesia—
Hamburg, 6 c. 1 q.
Lisbon, 10
Manganese—
Antwerp, 1 bg.
Paint—
Antwerp, 2 t.
Painters' Colours—
Rotterdam, 2 c.
Salt—
Drontheim, 3 c.
Soda—
Christiania, 4 t. 8 c. 2 q.
Oporto, 1 19
Rotterdam, 15 7 3
Soda Ash—
Bergen, 10 t.
Christiania, 5 7 c. 2 q.
Sulphur—
Drammen, 100 t.
Superphosphate—
Gibon, 510 t. 2 c.
Reval, 10
Tallow—
Pozzuoli, 2 t. 1 c. 3 q.
Yarnish—
Oporto, 2 cs.
White Lead—
Copenhagen, 3 t. 19 c.
Oporto, 7 6
Stavanger, 1 4 1 q.

GOOLE.

Week ending February 8th.

Alkali—
Boulogne, 8 dms.
Chemicals *(otherwise undescribed)*
Amsterdam, 20 cks. 1 cs.
Antwerp, 18 1 dm.
Hamburg, 10
Rotterdam, 20
Coal Products *(otherwise undes.)*—
Amsterdam, 83 cks. 10 cs.
Antwerp, 2
Boulogne, 3 2
Rotterdam, 9
Dyestuffs *(otherwise undescribed)*
Ghent, { 58 bgs. / 2 cks.
Hamburg, 33 3 cs.
Logwood—
Hamburg, 48 t.
Manure—
Ghent, 382 bgs.
Rotterdam, 50
Painters' Colours—
Amsterdam, 4 cks.
Boulogne, 1 cs.
Hamburg, 2 dms.
Rotterdam, 1 2 tins
Pitch—
Antwerp, 551 t.
Dunkirk, 435
Tan Extract—
Ghent, 20 cs.

GRIMSBY.

Week ending February 11th.

Alkali—
Hamburg, 22 cs.
Port au Prince, 48 dms.
Caoutchouc—
Gothenburg, 5 cs.
Malmo, 1 pk
Chemicals *(otherwise undescribed)*
Antwerp, 2 cs.
Dieppe, 10
Coal Products *(otherwise undes.)*—
Dieppe, 134 cks. 5 pks.
Hamburg, 5 cs. 10 btls.
Colours—
Gothenburg, 1 kg.
Port au Prince, 3 cs.
Painters' Colours—
Antwerp, 8 pks.
Dieppe, 5 cks.
Hamburg, 4
Rotterdam, 1
Pitch—
Antwerp, 93 t.

PRICES CURRENT.

WEDNESDAY, Feb. 22, 1899.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. *at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.*

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9	&	8/3
,, Glacial .. .. ,,		35/-	
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¼
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	9
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	0	11½
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	0
Arsenic, white powdered .. .. nett per ton	16	10	0
Alum, loose lump .. .. ,,	4	5	0
Alumina Sulphate (pure) .. .. ,,	3	15	0
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2¾
,, = 24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	19	0	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	10	2	6
,, ,, (grey) Hull .. .. ,,	10	1	3
Aniline Oil (pure) .. .. per lb.	0	0	4¾
Aniline Salt ,, ... ,,	0	0	4¼
Antimony .. .. per ton	37	15	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	4	10	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	5	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizatine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	8
,, 50/90 ,, ... ,,	0	0	8
Carbolic Acid (crude 60°) .. .. ,,	0	1	11½
,, (crystallised 40°) .. .. .. per lb.	0	0	6¾
,, (liquid 95/97%) .. .. .. per gallon	0	1	0
Creosote (ordinary) .. .. ,,	0	0	3
,, (filtered for Lucigen light) .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	2	12	6
Pitch, f.o.b. Liverpool or Garston .. .. ,,	1	2	6
Solvent Naphtha, 90% at 160° .. .. per gallon	0	1	1
Copper .. .. per ton	71	17	6
,, Sulphate .. .. ,,	24	10	0
,, Oxide (copper scales) .. .. ,,	54	0	0
Glycerine (crude) 80% .. .. ,,	24	0	0
,, (distilled S.G. 1250°) .. .. ,,	48	10	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	2	6
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	15	0	0
,, Litharge Flake (ex ship) .. .. ,,	16	15	0
,, Acetate (white ,,) .. .. ,,	26	0	0
,, ,, (brown ,,) .. .. ,,	18	0	0
,, Carbonate (white lead) pure .. .. .. ,,	18	10	0
,, Nitrate .. .. ,,	23	10	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	0	0
,, ,, (grey) (ex ship) .. .. ,,	7	17	6
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton	9	10	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	15	10	0
,, Borate .. .. per cwt.	2	0	0
,, Ore, 70% .. .. per ton	3	10	0
Methylated Spirit, 61° O.P .. .. per gallon	0	2	0
Naphtha (Wood), Solvent .. .. ,,	0	3	0
,, ,, Miscible, 60° O.P. .. .. .. ,,	0	3	10
Oils:—			
Cotton-seed .. .. per ton	16	0	0
Linseed .. .. ,,	19	5	0
Stearine .. .. ,,	26	0	0
Phosphorus (Yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	0	0
,, Chlorate .. .. per lb.	0	0	3½
,, Cyanide, 98 % .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) 90 % .. .. per ton	22	0	0
,, ,, ,, 75/80 % .. ,,	17	15	0
,, Potash Hydrate Liquid 50 % .. .. ,,	10	10	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	2	12	6
,, Prussiate Yellow .. .. per lb.	0	0	7½
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	0
,, Muriate, 80 % ,, ... ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3 7/16
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % .. nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	5	0
,, ,, (Carb. Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Soda Crystals) .. .. .. ,, ,, (f.o.r. w'ks.)	2	10	0
,, Acetate (ex-ship) .. .. ,,	12	10	0
,, Arseniate, 45 % .. .. ,,	13	0	0
,, Chlorate .. .. per lb.	0	0	3¾
,, Borate (Borax) .. .. nett per ton	16	0	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton (10 ton lots)	7	12	6
,, ,, (74 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,, (10 ton lots)	6	17	6
,, ,, (60 % Caustic Soda) .. ,, ,, (10 ton lots)	5	17	6
,, ,, (pure liquor 90° Tw.) .. ,, ,, (10 ton lots)	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate (cwt. kegs) .. .. ,,	6	15	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25 % .. .. ,,	16	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	9
,, Nitrite, 98 % .. .. per ton	26	0	0
,, Phosphate .. .. ,,	10	7	6
,, Prussiate .. .. per lb.	0	0	5½
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	10	0
,, Stannate, 40 % .. .. per cwt.	3	10	0
,, Sulphate (Salt-cake) .. .. per ton	1	10	0
,, ,, (Glauber's Salts .. .. .. ,,	1	10	0
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	4	15	0
Strontium Hydrate, 100 % .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. .. per lb.	0	0	5¾
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton	7	0	0
,, (Roll Brimstone) .. .. ,,	6	0	0
,, Brimstone: Best quality .. .. ,,	4	12	6
Superphosphate of Lime (26 %) .. .. ,,	2	10	0
Tallow .. .. ,,	24	0	0
Tin Crystals .. .. per lb.	0	0	7
,, English Ingots .. .. per ton	112	0	0
Zinc (Spelter) .. .. ,,	27	17	6
,, Chloride (solution, 100° Tw.) .. .. .. ,,	7	5	0
,, Sulphate, Crystal .. .. ,,	6	15	0

THE

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AND

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LATE ADVERTISEMENTS.

TENDER.

THE Corporation of Middleton are prepared to receive Tenders for the Wet and Dry Gas Meters, Tubes, and Fittings, SULPHURIC ACID and LIME required at their Gas Works during the ensuing 12 months.

Further particulars and form of Tender may be obtained from Mr. T. Duxbury, Gas Manager.

Tenders, addressed to the Chairman of the Gas Committee, to be delivered at my office on or before Wednesday, the 15th March, 1899, endorsed "Tenders for Meters" or "Tubes," etc., as the case may be. The Corporation do not bind themselves to accept the lowest or any Tender.

FREDERICK ENTWISTLE,
Town Clerk.

Town Hall, Middleton,
2nd March, 1899.

EDGE RUNNERS WANTED.—Over driven preferred, and from four to five feet stones.—Send particulars to "Engineer," Langbourne Wharf, Millwall, London, E.

FOREMAN for Vitriol and Nitric Acid Wants Situation. Experienced Chemical Plumber; good references.—"S," *Chemical Trade Journal* Office, Manchester.

CHEMICAL WORKS.—Wanted, Position as Manager or Chemist, with view to partnership. Exceptional experience.—Address, "R.S.," *Chemical Trade Journal* Office, Manchester.

SOAPS, Candles, Lubricating Oils, and Greases.—Technical Manager (German) Wants Situation; has full chemical and practical knowledge of the branches above mentioned. Speaks English, French, and Italian. Good references.—Address, "Competent 20," *Chemical Trade Journal* Office, Manchester.

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Advertisements.

Prepaid Advertisements of Situations Vacant, Premises on Sale or To be Let, Miscellaneous Wants, and Specific Articles for Sale by Private Contract are inserted in the *Chemical Trade Journal* at the following rates:—

30 Words and under ..... 2s. 0d. per insertion.
Each additional 10 words ..... 0s. 6d. ,,

THE NEW FOOD ADULTERATION BILL.

THAT there is scope for improvement in the existing legislative measures for the prevention of food adulteration, no one who has any knowledge of them will deny, so that naturally a good many who are interested in this question have been expecting great things from the new Bill for which Mr. Long is responsible.

We have read the Bill, and have found several items which are likely to prove of service, but, taken as a whole, we do not think it goes far to solve many of the difficulties which have to be contended with at present. It is something, however, to find that it is actually of a progressive nature.

In the first place, the importation of margarine, margarine-cheese, condensed separated or skimmed milk is forbidden except in packages on which these several denominations are boldly printed. When offered for sale the brand or mark required by section 6 of the Margarine Act, 1887, shall be on the package containing margarine or margarine-cheese, and not solely on a label, ticket, or other thing attached to the package. Also the letters to be printed on the paper wrapper shall be not less than half an inch long and distinctly legible, and no other printed matter shall appear on the wrapper. The latter proviso is of great importance in connection with condensed milks.

The careless issue of warranties will be checked by the conditions imposed in section 7, for it renders it compulsory for every margarine factor and wholesale dealer to keep a register showing the quantity and destination of each consignment of margarine products sent out from his manufactory or place of business, and this register shall be open to the inspection of any officer of the Board of Agriculture. Any infraction of this regulation will subject the delinquent to a maximum fine of £10.

There are several clauses giving additional powers to the Board of Agriculture, which will lead to pressure being brought to bear upon those local authorities which fail to do their duty in enforcing the Food and Drug Acts. The Board will also have power to determine what will practically be tentative standards of purity, by which an article may be judged presumptively until the assumed deficiency is confirmed or disproved by a more comprehensive analysis and investigation. This defining of what constitutes a deficiency in any of the normal constituents of genuine milk, butter or cheese, will do much to simplify procedure. The regulations thus framed will constitute a screen, as it were, through which produce may be riddled, and if the mesh is too coarse at first it can be made finer by degrees, while if too fine at the outset it will soon become choked by the excessive number of cases that will have to be dealt with. In this way there is every prospect of *data* being obtained from which fixed standards of purity may ultimately be constructed. All these provisions promise to be helpful as far as the control of agricultural produce is concerned, but there is one point

which is likely to cause difficulty in the administration of the Act when it comes into force. It has reference to the use of antiseptics.

In defining what constitutes adulteration in the case of butter or milk, it is stated that these articles shall be deemed to have been adulterated by the addition of any other substance, or the extraction of any part which reduces the quality, with one exception, namely, "that butter or milk shall not be deemed to be adulterated by reason only of the addition of any preservative or colouring matter which does not render the butter or milk injurious to health."

It is the last few words that will cause the trouble, because at present opinions differ so widely as to whether certain preservatives are "injurious to health." According to the recent researches of Dr. Leffmann, sodium benzoate and borax are not injurious, while salicylic acid is.

But there are others who persistently include everything but salt in their *Index expurgatorius*. It will thus be evident that this one question remains as chaotic as ever. It is a detail, however, which can be remedied later should the Bill prove successful on broader lines.

THE WELSH TINPLATE TRADE.

SERIOUS OUTLOOK.

FEW industries have suffered more of late than that of the Welsh tinplate industry. In the course of some five years it has been reduced by two-fifths. In other words, two out of every five mills have been stopped, and that, with the introduction of labour-saving machinery, has thrown out of employment more than two out of every five persons formerly engaged in the trade. All this could not have taken place without works proprietors losing much of their capital, and workmen suffering much distress and privation. But in addition to the inevitable loss caused by such circumstances as the tinplate trade has gone through, much preventible loss has resulted from the disputes between capital and labour that have arisen from trying trade conditions. Unfortunately, these are not at an end, for once more we find in various tinplate centres all the elements at work which shortly may cause the busy wheels of tinplate mills to stop, and cause a cessation of the labour which produces the bright tinned sheets in our tinhouses. According to the *South Wales Daily News* we are nearer to another crisis in the tinplate trade than is realised except by a few. This is in no way due to low prices being paid for tinplates, for, as a matter of fact, higher prices are paid for plates now than have been obtained possibly since 1892—10s. 6d. to 11s. per box used to be considered a satisfactory price; now 11s. 6d. to 12s. per box is quoted, and said to be obtained, and this when less is paid for labour than ever remembered before. Of course, the price of raw material—such as coal, steel, and especially tin—is high, and in all probability the results of tinplate-making, as far as profit is concerned, are as bad as ever; but the fact stands, prices have gone up in sympathy with raw material, and all the while the price of labour has been pushed down and down until, from one end of the trade to the other, uneasiness, dissatisfaction,—and we may say desperation—exist among the workers, and this may at any moment break forth into a determination among the men not to continue to work at starvation wages, and thus paralyse a large portion of the trade.

In a small way we have this desperate determination manifested among the Moorwood millmen at Llanelly, who, finding after close upon a year's idleness that their first pay yielded but £1. 5s. to the roller, £1. os. 7½d. to the doubler, 14s. 3½d. to the furnaceman, and 10s. 6d. to the behinder for five days' work of twelve hours each, working in pairs, threw down their tools and refused their labour. Practically the same thing is seen in the conduct of the Cwmbwria millmen, who had also suffered great privations through enforced idleness, yet they have been found deliberately signing and presenting notices to cease work, to bring to an end (as they say) intolerable conditions. Tinplate workers at Pontardulais, Swansea Valley, Neath, Briton Ferry, Aberavon, &c., have not suffered as these men have, but they have been working on a reduction of 15 per cent. off the 1874 list, and now their cup of forbearance is to be filled to overflowing by a request to increase this already heavy wage reduction. These men observe that the further demand to diminish their already curtailed wages is not due to bad trade or high price of material, but the ability and the successful efforts of a few employers to cut down wages for long periods. They are frankly told by their own employers that further reductions are demanded from them for no other reason than that competitors obtain exceptional advantage in labour cost, and that it must be also obtained by them or work must cease. The lay mind can easily grasp the difficulty the ordinary employer is in, say, at Morriston, Briton Ferry, and Aberavon when his competitor in the same market for none too numerous orders can dispose of the production of modern and splendidly-situated mills at 10 per cent. of labour cost lower than himself. In these days, when fractions of a penny secure or lose orders, this tells immensely against any maker. But, after all, this is a state of things brought into existence by makers themselves, and it is not altogether strange that the tinplate-worker, who has allowed as a result of it cut after cut in his wages, at last turns, places his back against the wall, and says, "I will allow no more cutting come what may." It is beyond question that this is putting in words the existing feeling among tinplate workers, and this feeling of almost desperation with the necessities of employers, brought into existence by the Llanelly wage agreement, is about giving birth to a crisis that may see a large number of mills closed for a time, with a further spread of misery and destitution in tinplate centres. At Pontardulais, Pontardawe, Morriston, Briton Ferry, and Aberavon demands for increased reductions have been made, and in each and all of these places the men's reply has been a refusal. But matters must shortly come to an issue, because notices are about terminating, and, as we have seen, the necessity of employers and the determination of the men may result in a state of things that all will have reason to deplore.

MANCHESTER LITERARY AND PHILOSOPHICAL SOCIETY.

PRESENTATION OF THE WILDE MEDAL.

A SPECIAL meeting of this Society was held on Tuesday for the presentation of the Wilde medal for 1899 and the Wilde premium for 1899. Mr. James Cosmo Melvill, president of the Society, occupied the chair. He said the Council of the Society, by a unanimous vote, had awarded the Wilde medal this year to Sir Edward Frankland, K.C.B., F.R.S., for his chemical researches. Unfortunately, in consequence of the recent sudden death of Lady Frankland, Sir Edward was unable to be present and receive the medal in person.

The Wilde premium for 1899, the President proceeded to say, had been awarded to Dr. Charles H Lees, in recognition of his successful researches in physics, more especially with regard to the thermal conductivities both of solids and liquids.

THE WILDE LECTURE.

Professor William Ramsay afterwards delivered the Wilde lecture, taking for his subject the newly-discovered elements of the air and their relations to the kinetic theory. He began by referring to the work of John Dalton on the specific heat of gases, and his discovery that when a gas is allowed to expand against pressure it grows cold. The labours of Mayer, who made use of this fact in calculating the mechanical equivalent of heat, and of Joule, who made the first determination of its numerical value, were also referred to. The difference between the specific heat of a gas measured when the gas is not allowed to expand, and consequently does no mechanical work, and that required to raise its temperature when it is allowed to expand against pressure, and do mechanical work, was then explained. In the case of a "perfect gas," the proportion between these two specific heats is as three to five. This has been experimentally found to be true for mercury gas, but not for the common gases, oxygen, hydrogen, nitrogen, carbonic oxide, etc. Professor Boltzmann's theory to account for the discrepancy was next explained. The gases argon and helium are found to possess the theoretical ratio. But if it be accepted as the reason that they possess this ratio that their ultimate particles, or molecules, are hard, smooth, elastic spheres, then the position of argon in the Periodic Table is an abnormal one. If, on the contrary, no weight be attached to the behaviour of argon as regards the ratio of its specific heats, then it might occupy a vacant niche in the Periodic Table. But if that niche is found to be occupied already by another gas, then it will follow that the ratio of the specific heats of these gases has the real physical meaning attached to it. This gas, after a long search in which many minerals, meteorites, and mineral waters were investigated, was finally found mixed in small quantity with the argon of the air, from which it was separated by liquefying argon and distilling it; the lowest boiling portions were found to be lighter than argon and to contain the long-sought-for gas, to which the name "neon," or "new," was given. At the same time, other two new elementary gases were found, one of which has almost the same density as argon but exhibits a totally different spectrum; it was named "krypton," or the "hidden." The other is considerably heavier than argon, and will doubtless turn out to be one for which there is a gap in the Periodic Table; to it the name "xenon," or the "stranger," was given. A gas showing the spectrum of carbonic oxide, with other lines, the elementary nature of which has not yet been established, was also recognised; it was named "metargon." These gases are still being investigated. Their spectra were shown, and diagrams were projected on the screen indicating how they had been separated from air.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Smoke Consumer. E. Browning. 3,163. February 13.
Bacterial Filters. H. Tulloch. 3,173. February 13.
Manufacture of Sulphuric Anhydride. G. W. Johnson. 3,185. February 13.
Improved Soap and Size Boilers. H. Bowman and T. Settle. 3,224. February 14.
Preparing Peat Fuel. F. McNamee. 3,226. February 14.
Manufacture of Matches. O. Lindner. 3,237. February 14.
Explosives. A. J. Brown 3,247. February 14.
Manufacture of India-rubber and Gutta Percha. E. Garnier. 3,256. February 14.
Apparatus for Manufacture of Combustible Gas. H. H. Böhndel and C. C. Yeaton. 3,290. February 14.
Gold Extraction. A. A. A. Byrd. 3,326. February 14.
Artificial Fuel. W. F. Richards, C. James, T. P. Sims, and W. Terrill. 3,331. February 15.
Artificial Stone. J. Lander. 3,336. February 15.
Manufacture of Gelatine, etc. W. H. Percy. 3,345. February 15.
Manures. J. Crone, D. C Taylor, and F. Williams. 3,366. February 15.
Preparation of Manganese, Manganese Oxide, or Hydrate. T. Macalpine. 3,381. February 15.
Using Distillers' Waste. J. J. Knight and J. Sampson. 3,415. February 16.
Oil Filters. L. White. 3,422. February 16.
Producing Zinc Oxide. G. de Bechi. 3,475. February 16.
Cleansing Composition. J. D. Sommerville. 3,525. February 17.
Treating Sulphide Ores. C. D. Abel. 3,575. February 17.
Purifying Distillers' Waste, etc. J. W. Wheldon. 3,580. February 17.
Electrolysis of Salt Solutions. A. J. O. Chalandre, L. J. B. Colas, and C. J. Gérard. 3,648. February 18.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in the Purification of Sewage and Polluted Waters. F. P. Candy, Ivy Bank, Ashley-road, Altrincham. Eng. Pat. 3,333. February 10, 1898.

This patent relates to a form of anærobic filter, the filter bed of which is provided with draining pipes to carry off the filtered sewage, and ventilating pipes to permit the escape of any gases evolved, these pipes being water-sealed. The filter bed is covered with an air-tight layer of clay, and the exit pipe for the filtered sewage is self-sealing, so that the filter is entirely non-ærating. There are two figures, which should be consulted for particulars of the construction of the bed itself.

Improvements in and in connection with the Purification of Sewage and Impure Waters. F. P. Candy, Ivy Bank, Ashley-road, Altrincham. Eng. Pat. 7,749. February 3, 1898.

The filter is circular, with a central pillar, which supports a short vertical shaft running in ball bearings, and on which is pivoted a horizontal perforated pipe of the same diameter as the filter. By arranging the perforations so that for half the diameter they look to the right and the other half to the left, and delivering the sewage at a small pressure, the force with which the jets are discharged will cause the perforated pipe to rotate and spread the sewage. Where the rate of filtration does not allow for sufficient head of sewage, other suitable mechanical means of assisting the rotation are provided. There is one figure.

Electrolytic Manufacture of Alkaline Bichromates. J. Heibling, Grenoble (Isère) France. Eng. Pat. 4,264. February 24, 1898.

A solution of an alkaline chloride is electrolysed in a suitable cell, using an alloy of iron and chromium (containing 55% of the latter) for the positive pole, and iron or carbon plates for the negative poles. The E.M F. for each element in a battery of cells is 1½ volts, and the energy used per kilogramme of crystallised bichromate of soda is two kilowatt-hours. The cells are arranged on an inclined plane, in batteries, the bottom of each cell being connected with the top of the next. An inverted bell is placed over the top of each electrode to collect the gases given off. The chromium passes into solution and the iron is left insoluble as sesqui-oxide, which is separated from the solution by any suitable means. There is one figure.

Process for the Manufacture of Sulphate of Copper. Jules Lagache, 22, Rue des Allamandiers, Bordeaux, France. Eng. Pat. 11,633. May 23, 1898.

Scrap copper is heated with 66°B sulphuric acid in a furnace similar to that used for the production of hydrochloric acid, and provided with an agitator. When the copper has combined with the acid, the mixture is raked on to the sole-plate of the furnace and roasted, so as to drive off excess of sulphuric acid and yield the anhydrous sulphate. The resulting mass is treated with hot water to dissolve out the sulphate, any metallic copper or sulphide left being used over again. The sulphurous and sulphuric acids given off are recovered. There are three figures.

Improvements in the Manufacture of Flowers of Sulphur. R. H. Davidson and The United Alkali Co., Ltd., both of G11, Exchange Buildings, Liverpool. Eng. Pat. 7,086. March 23, 1898.

When the sublimed sulphur first passes into the condensing chambers, the oxygen in the air which is present oxidises the sulphur, causing a loss, and imparting an acid reaction to the deposited flowers of sulphur. To avoid this the air is displaced with some inert gas, such as nitrogen or limekiln gases. The inert atmosphere may be caused to circulate through the condensing chambers if desired.

Improvements in Process of Manufacturing Oxides. C. S. Bradley, Avon, County Livingston, N. Y, State, and C. B. Jacobs, East Orange, N. J. Eng. Pat. 26,059. December 9, 1898.

Finely-ground carbide and hydroxide of barium are mixed in molecular proportions and heated in a retort to the fusing point of the hydroxide. Acetylene and its homologues are given off, and barium oxide is left. The reaction is expressed thus :—

$$BaC_2 + Ba(OH)_2 = 2BaO + (C_2H_2)x.$$

The oxide is obtained in a porous state, which facilitates its conversion into the dioxide, which is used considerably for industrial purposes.

Legal Intelligence.

HIGH COURT OF JUSTICE.

CHANCERY DIVISION.

(*Before Mr. Justice Stirling.*)

HAYLES AND OTHERS V. PEASE AND PARTNERS (LIMITED).

This case raised a question as to the right of the owners of minerals lying under an enclosed common to use the surface of a certain allotted part of the common for the purpose of getting and working the minerals lying under other parts of the common. The matter came before the Court upon a special case stated for the opinion of the Court, and on February 4th last his Lordship delivered a considered judgment. By that judgment it was declared that the defendants were entitled under the provisions of the Enclosure Act to use the surface of the allotment in question for sinking pits, and to use the pits so sunk and the existing pits and shafts for winning, working, and carrying away coal and other minerals lying under the allotment, and also lying under other parts of the common, and also to use the water from a certain reservoir referred to in the special case for the same purposes, but not to use certain engine-houses, engines, shops, and other works now standing upon the allotment; and an injunction was granted against the defendants in accordance with that declaration.

Mr. Grosvenor Woods, Q.C. (who, with Mr. W. A. Meek, appeared for the defendants), recently applied to have the above-mentioned judgment varied upon the ground that a mistaken inference had been drawn from the facts as stated in the special case with reference to the engine-houses, engines, and works standing upon the allotment. It appeared that from an insufficient statement in the case as to the date of erection of the works it had been assumed that these engine-houses, engines, and works had been erected by the defendants or their predecessors in title during their tenancy under a certain agreement which had expired in the year 1896, and his Lordship's judgment with reference to the engine-houses, engines, and works had been based upon that assumption as to the facts. It had since been ascertained, and was now admitted, that the engine-houses, engines, and works had in fact been erected prior to the date of the agreement in question, and the present application was made in consequence of such discovery.

Mr. Upjohn, Q.C (who, with Mr. H. F. Manisty, appeared for the plaintiffs), stated that the Court had unwittingly been misled as to the facts in question, and submitted to any variation of the order which his Lordship might think fit to make.

Mr. Justice Stirling acceded to the application and varied the order (which had not yet been drawn up) by declaring that the defendants were entitled to use the engine-houses, engines, and works for the purposes mentioned, and he discharged the injunction which he had previously granted.

Reports of Companies.

THE SALT UNION, LIMITED.

A DEPRESSING REPORT.

The tenth ordinary meeting of the shareholders in the Salt Union, Limited, took place on Tuesday at the Law Association Rooms, Cook-street, Liverpool, Mr. G. H. Cox in the chair. There was a crowded gathering of shareholders.

The Chairman, in moving the adoption of the report and accounts, said the report was not a favourable one, but it had not been within the power of the board—the new directors—to make a better one. They would remember that Mr. M'Dougall had warned them not to expect much this year, largely because of the contracts that had been entered into, and because it was impossible to change the policy of a great company at a moment's notice. The directors had spent an enormous amount of time and labour since they had taken their seats on the board in the interests of the Company, so much so that, if it could have been seen beforehand, they would never have set themselves the task. The business was a very gigantic one; they were not only makers of salt, possessing salt works in different parts of the country—in Cheshire, Worcestershire, and Middlesbrough—but they were engineers, carriers, boat builders, boat owners, East Indian and foreign merchants, and also distributors. Not content with that, the old board thought fit to go in for the alkali and soap trades. The new members of the board had come in, to a large extent, as a committee of investigation, while conducting the regular business of the Company. Their investigations had led them to the following conclusions—first, that the Company was vastly over-capitalised—and, to make matters worse, it was attempted to work it as a high monopoly. They would remember that large profits were realised for the first year or two, but the inevitable result was that of killing trade in many directions, and of bringing in a whole crowd of competitors in the soap and salt making line in Cheshire, Middlesbrough, Fleetwood, Barrow, and Staffordshire. Some of those who were responsible for this left the board early—and, he believed, with profit to themselves. Their successors, to a great extent, maintained the monopolist policy, retaining the land, works, and even the high prices in many markets. In consequence of the competition in Cheshire the prices were lowered, and here the Salt Union held its own. The policy he might describe as holding an umbrella over the heads of many of their competitors, who early found what was the most profitable kind of salt to make. They consequently struck into the Salt Union trade, and the result was that the Union had lost both its price and its tonnage to a certain extent. The buying of land had been a very disastrous policy, for it swallowed capital that they would be glad to possess at the present time. This was

A MISTAKEN POLICY

and the cause to a great extent of the existing position of the Union. It was only fair to say that there were some things that the former management could not avoid, for instance, the loss of trade through adverse tariff, high freights, and the development of the native supplies. In Australia there were salt lagoons which dried up at certain times, and all that was necessary was to plough up the salt remaining, and the same thing took place in California. The only remedy for the existing state of affairs in this country was a reasonable combination amongst those who made salt. They had been able to bring about a combination in Middlesbrough, and a limited company was formed, by which the makers were bound together for two years, and the combination was working exceedingly well Middlesbrough was the only department of the Union that showed an improvement, so far as profits were concerned, during the past year. This should be an object lesson to salt makers in other parts of the country to show that only by reasonable combination could any profit be made. He did not mean a monoply in the sense it was taken to mean a few years ago, but a combination to limit production at any rate to the existing pannage, and to put prices on a reasonable level. An endeavour was made to bring about a similar combination in Cheshire, but at the last moment, when the documents were ready for signature, some of the Cheshire manufacturers who had pledged themselves to this agreement refused to sign. Since then a sort of tentative arrangement had been made with the bulk of the Cheshire and Staffordshire makers that promised to work successfully. Even the moderate advance in price since made should yield a profit of from £30,000. to £40,000. However, it was probable they would be saddled with an alkali contract entered into two years ago, which was at a price that would certainly yield no profit. They had also a low stock of salt to the value of some £7,000. Together these two items might be put down at £12,000., against a possible profit of the inland trade of some £40,000.

INDIAN TRADE DISASTROUS.

With regard to the Indian trade there was no doubt that it had been nothing short of disastrous, due to the shipments made before the present board was in power, and largely owing to the high freights ruling. The Indian trade for the present showed a profit, but too much reliance could not be placed on this fact, for no one knew what would be the result of freights during the current year. So much for the trade of the port. Now he believed they had a valuable property—a property greatly over capitalised, no doubt, but still a valuable one. They had, perhaps, the finest works in the United Kingdom for salt working, and they had command, owing to their geographical position, of trades in which their competitors, perhaps with one exception, could not possibly compete; and they had many valuable brands, packets, &c. Their carrying trade was also a profitable one, and if some of the burdens could be removed and the business put on commercial lines, there was no reason why something should not be made of the concern, always bearing in mind that one of the chief burdens was its over-capitalisation and the locking up of much of its capital in unproductive land. The suggestion to remove the offices to Liverpool had been carried out, and they had saved £1,300. by the transfer, besides which there were savings on salaries and other matters amounting to £2,700. There were yet further economies to be effected in the way of concentration and the cutting off of surplus lands. All this work was slow, and he would prefer some more drastic measures. There was no disguising the fact that the patient was sick, and they must apply prompt remedies, and where diseases had taken root they wanted to apply the sharp knife of the surgeon.

THE CHEMICAL VENTURES

Now, with regard to the making of alkali and the soap business. With regard to the first, they had tried the patent electrolytic process, but it was thought wise to pursue it no further. The soap making was thought by many shareholders to be a business which they might look to for dividends, even if salt continued to fail, and they had had much proffered advice. One shareholder—a lady—had offered many excellent suggestions, but there were considerations which she was not aware of, and they had to admit that on the lines hitherto adopted this business must be a failure. They were considering whether it was worth while to put the business on a better footing. So far £5,000. had been spent, and the plant was not complete. There was no glycerine plant, without which a soap works would not pay. Further developments would involve them in an expenditure of from £5,000 to £20,000., and as they were not over-burdened with capital, it was a question whether, with so many enterprising and wealthy makers in the field, it was desirable for them to go any further. It had been usual for the directors to borrow from the bank to pay their debenture interest, which they recouped by their trading, but this year, with so much of their capital locked up, they had had to pay a large sum of money on account of contracts which were entered into by the old board, and they had been compelled to go to the bank for actual working capital. Of course they had plenty of security in this land, outside the fund of the debenture guarantee, and they had their reserve fund, which, unfortunately, had been locked up in land or partly in their own debentures. Now, as they would see, they owed the bank £25,000. on the 31st December.

Mr. J. Holt seconded the motion for the adoption of the report.

PERTINENT CRITICISMS.

The Secretary read a letter from Mr. Henry Hertz, London, dissenting from the way in which the balance-sheet was rendered. He objected to goodwill figuring as an asset. The goodwill of a concern that could not pay its debenture interest except out of capital was absolutely worthless. He had raised the question before, but had hoped such a faulty system would not be continued under the new management. After dealing with several items in the balance-sheet, the writer said he considered it was a question whether so much of the Company's capital had disappeared as to render further trading unjustifiable. It was, he said, incumbent on the directors to draw up a return of the assets in accordance with the returns from them, which was the only true estimate of their value.

The Chairman said the Board had given this letter careful consideration, and were bound to say that there was a great deal in it, but if they were to go into all these matters it meant reconstruction. The remark about the disappearance of capital would receive further attention in the near future.

Mr. Archibald Coghill said there was a shrinkage in the profits of £38,000 Was this in any particular district, or was it distributed? Was the profit of one district swamped by the loss of another?

The Chairman said that Durham was the only district that showed a profit.

Mr. Holbrook wished to have the whole report referred back for further consideration. In accordance with his notice of motion, he moved that the debenture interest be reduced to about 3 per cent., in accordance with the action of municipalities, colonial, and Government authorities; that no directors' fees be paid, but that they have honorary directors, with a general manager; and, lastly, that no preference be given to distributors, and that the Indian market be supplied with

healthy Cheshire salt. He did not expect this amendment to be carried, but if something was not done they would be wound up.

Mr. Heatley seconded the amendment.

The Chairman said they would like to be able to reduce the debenture interest, but the debenture holders might have something to say. If they could get honorary directors to do such work he would be glad to give them a place. The distributors did not get any preference, and as for supplying India with salt they could only get in at a certain point, Calcutta. The rest of India was supplied with native salt. They would be glad to supply China, but the import of salt was absolutely prohibited, except small quantities in packets.

Mr. William Parkes and Dr. M'Dougall asked several questions, and Mr. King said a promise was made at the last meeting that two outside directors would be appointed by the shareholders.

Mr. M'Dowell said that no names had been put before the directors.

The Chairman said that perhaps too many cooks would spoil the broth. New directors would have to begin to learn the business.

Mr. M'Dowell said that as chairman of the late Shareholders' Committee he recognised what the directors had done, and congratulated them, but there were many reforms still necessary, and there was no doubt the position of the Union was critical. They could not afford to continue the old policy of drift. The sooner they put responsible heads to each department the better.

The Chairman said both his colleagues and himself were impressed with the necessity for reform.

The report was then adopted.

The retiring directors, Messrs. William Harvey Alexander and H J. Falk, were reappointed on the motion of Dr. M'Dougall and Mr. C. Crichton.

THE FERRO-SODIUM COMPANY, LIMITED.

A winding-up order having recently been made against this company, the first meetings of creditors and contributories were held recently at the Carey-street offices of the Board of Trade, Mr. Cully, Assistant Official Receiver, presiding.

The Chairman stated that the company was formed in December, 1894, to acquire from Mr. R L. Sentinella certain patents for the purification of iron and steel by the use of a flux. The original capital of £2,000. was increased in February, 1897, to £6,000. The original capital was all issued and had been paid up, but only 64 shares of the new capital were issued, and they were given, apparently, as premiums for the underwriting of certain debentures. No contract in respect of those shares had been filed at Somerset House. The company was promoted by Capt. H. H. Grenfell, R.N., who was to receive 333 of the vendor's shares. Under the purchase agreement, dated December, 1894, the vendor agreed to sell the patent rights to the company for £130. in cash and £1,000. fully-paid shares in the company, which shares were to be entitled to one-half of the net profits of the company, available for dividend, notwithstanding any increase in the capital. Under the agreement Captain Grenfell was to obtain subscriptions for the balance of the capital and to pay the expenses of the promotion, and the vendor was to be the manager of the company. The qualification of the directors was the holding of £100. shares. Mr. McHardy financially assisted Captain Grenfell with the promotion and divided with him the shares which he had received from the vendor. In January, 1895, a resolution was passed by the directors that Captain Grenfell should provide clerical staff, etc., for £150. a year, and in the following October another resolution was passed that he should receive £150. per annum as managing director. The latter resolution was agreed to by Mr. McHardy on the condition that it should be confirmed later on, by the shareholders, but it appeared that, although the salary was paid the matter was not brought under the notice of the shareholders. The business of the company seemed to have been hopelessly mismanaged, and resulted in a continuous loss, but the patents were doubtless of value, and the receiver for debenture holders was now carrying on the business at a profit. The accounts had been described by the auditors in 1896 as being in a chaotic state, and defalcations to the amount of £30 . had taken place. The case called for strict investigation and would receive the necessary attention at the hands of the Official Receiver. (Hear, hear) Debenture bonds for £3,500. had been issued, and there were other creditors for £279., whilst the assets were valued at £818., exclusive of the patents.

There was a difference of opinion as to the appointment of a liquidator, and the matter will be referred to the Court for decision.

MESSRS. WALKERS, PARKER & CO., LTD.

The directors, in their tenth annual report and balance-sheet, state that the result of the year's trading is more satisfactory, and shows a net profit of £5.783. Owing to improved arrangements in purchasing of silver lead, the market fluctuations in silver have not affected the Company. Supplies, however, are more difficult to secure. The war between Spain and America caused the directors considerable anxiety, and for a time much inconvenience. The price of pig lead also became subject to violent fluctuations, varying as much as £2. per ton during a single week. Precautions had, however, been taken to reduce the risk of market losses, and the trading of the Company was therefore not so much affected as might have been anticipated. The Home Office regulations abolishing the employment of women in certain departments necessitated a considerable capital outlay at the Newcastle works, in order to minimise the extra cost of male labour involved. Through this alteration in the special rules the manufacturing cost of white lead has been permanently increased. The extra price of fuel, brought about by the Welsh coal strike, adversely affected the cost of production at the various works—more particularly in London,—and the trading profit suffered accordingly. The Workmen's Compensation Act, 1897, made it imperative that steps should be taken to provide against contingencies, but the rates quoted by several of the leading insurance companies were so varied and excessive that the directors decided to cover the risk by creating an insurance fund, and contributing thereto out of revenue, a sum of £500 per annum.

BOLCKOW, VAUGHAN, AND CO., LIMITED.

The thirty-fourth annual report of the directors was issued at Middlesbrough recently. The directors state that they have pleasure in laying before the shareholders the balance-sheet for the past year. The profit available for distribution, including the amount received from the Cleveland Salt Company, Limited, and other sources and after providing for depreciation, is £212,731. 19s. 8d. This sum added to the balance of £60,872. 7s. 1d. brought forward from last year's account gives a disposable surplus of £273,604. 6s. 9d., which it is proposed to appropriate as follows :—For payment of interest on debentures, £7,477. 10s. ; for payment of dividend on preference shares, £23,604.; for payment of dividend on 81,488 fully paid shares at 5 per cent. or £1. per share, £81.488. ; for payment of dividend on 93,045 shares, with £12. paid, at 5 per cent. or 12s. per share, £55,827. ; for further expenditure on Eston Wharf extension, £16 000 ; to be added to reserve fund, £25,000. ; balance to be carried forward, £64,237. 16s. 9d. ; total, £273,604. 6s. 9d. The retiring directors are Mr. A. C. Boyd and Mr. Arthur Keen, who are eligible and offer themselves for re-election.

THE GIFFRE ELECTRO-CHEMICAL CO., LTD.

In the course of his remarks recently, the Chairman of the General Water Power Co., Ltd., threw some light upon the history of the Giffre Electro-Chemical Company, Ltd., which seems to be confining its attention to the manufacture of calcium carbide. Mr. M. Armstrong (the chairman of the General Water Power Company, Ltd.), addressing the shareholders, said : As you are also well aware, when our company was formed the idea was most favourably received by some of the strongest financial houses in the City, and I think we may say that our list of shareholders is second to none in the City of London. Before the General Water Power, Limited, was started I had been interested in water power business for some time, and I was therefore able to hand over to this company various enterprises which I had selected as being worthy of consideration. It was decided that we should at once consider one of these, which had been brought to my notice by my colleague Mr. Vernon—viz , the Giffre scheme ; and one of my colleagues—Mr. Sawyer, an engineer of great experience—consented to go out to Savoy and carefully examine the works and advise us whether we should proceed in our intentions of purchasing it. Mr. Sawyer went down to Savoy, spent several days there, and, after an exhaustive examination, advised his colleagues that the proposition was one which we ought to take up, and negotiations were forthwith entered into for the purchase of the Giffre Company. We then consulted our financial friends, and it was decided that Mr. Sawyer should proceed to Paris and meet the French directors of the then existing Giffre Company, and purchase the undertaking on behalf of the General Water Power, Limited. These negotiations were carried out, and we were then able to place the business before the English public. The result was the formation of the Giffre Electro-Chemical Company, Limited, with a capital of £140,000., of which £130,000. was offered for subscription. Most of you will know from the prospectus of that company that the General Water Power Company received a sum of £20,000. in cash and £20,000 in shares. The flotation was successfully carried through, and although out of the moneys we received we had to pay the expenses of the issue and all the various other promotion expenses, amounting to a considerable sum, we are still left with a good balance of profit, sufficient to pay a very large dividend in cash on our paid-up capital, as well as our considerable amount of fully-paid shares These shares we regard as of great value, as from what we have been able to judge, and from what Mr. Sawyer has told us, the success of the Giffre Company should be assured and the carbide business in that locality become a great commercial success.

The progress of the company has been most encouraging, and our first location has made us a very large and handsome return.

Photographic Notes.

VICTOR FIXING SALT.

This new chemical preparation is an anhydrous acid hypo intended to replace the ordinary crystal hypo-sulphite of sodium used for fixing, and the following advantages are claimed for it:—(1) It dissolves instantaneously in water, being in a powder. (2) Although the weight is about two times less than hypo, it contains the same quantity of active substance. (3) On account of the acid reaction, a great number of negatives can be fixed without discoloring the solution, even if the negatives have been insufficiently washed after development. It is a well-known fact that if ordinary hypo is used for fixing, the bath becomes rapidly yellow or brown. This coloration easily stains the gelatine film and is the result of oxidation on small quantities of the developer which have not been removed by washing. (4) It becomes possible when using this fixing salt to fix plates and papers without washing them after development. (5) Lastly, it slightly hardens the gelatine, which is an advantage in hot weather.

The following bath is recommended for plates and papers:—Water, 1,000 grammes, or say 25 oz. fluid weight; Victor Fixing Salt, 80 grammes, or say 2 oz. weight. The price is 1/- per lb.

COLOUR PHOTOGRAPHY.

The following directions for taking colour photographs have been communicated to the Société Francaise de Photographie, by Professor Lippmann, and for further information on this matter, and also concerning the Victor fixing salt, we refer readers to Messrs. Fuerst Bros., 17, Philpot-lane, London.

Professor Lippmann says:—Dissolve 4 grms. of gelatine in 100 grms. water. Add 0·53 gr. bromide of potassium. For orthochromatising add about 6 cc of alcoholic cyanine solution 1:500, and 3 cc. of alcoholic solution quinolin red, 1:500.

After having mixed the above ingredients and reduced the compound to a temperature below 40°C., add (in a dark room), 0·75 grms. dry powdered nitrate of silver, and stir for a minute or two until dissolved. Filter through glass wool. Pour over the glass plates, which have been warmed, in the same way as collodion. Let the plates cool on a flat slab of very cold marble. Wet each plate with alcohol before washing, then wash for half-an-hour, drain, and dry it. The plates are then ready, and can be kept for a long time.

Before use moisten the sensitive emulsion with the following solution:—

Alcohol (absolute)	100 grms.
Nitrate of silver	0·5 ,,
Acetic acid (glacial)	0·5 ,,

Shake and dry. The plate thus manipulated increases its sensitiveness, but must be used the same day. Expose for about two minutes in sunlight before a Zeiss 6·3 lens.

Development.—Any developer may be used—amidol, eikonogen, etc. Perhaps the best effect is obtained by M. M. Lumière's developer:—

I	Water	100 grms.
	Pyrogallic acid	1 ,,
II.	Water	100 ,,
	Bromide of Potassium ..	10 ,,
III.	Caustic Ammonia.	
	Density 0·960.	

For developing, take:—

Solution I.	10 grms.
Solution II.	15 ,,
Solution III.	5 ,,
Water	70 ,,

It seems to be more advantageous to develop little and to intensify with bi-chloride of mercury and with amidol.

One can also develop very well with a dilute solution of ammoniacal protochloride of copper.

For fixing after intensification use cyanide of potassium.

Explosives in Mines.—The reports of the Chief Inspector of Explosives on the working of the Home Office Testing Station for 1898 was published on Saturday last. Colonel Ford, the chief inspector, says at the outset that as these reports are very instructive it is desirable that they should be separately published, in order that they may be obtainable by colliery managers and others concerned. The reports go very fully into every detail, weak spots are pointed out in the present system of firing explosives, and the results given of experiments carried out by experts. Some of the most important and interesting of the experiments were those with a mixture of coal-gas and air and coal-dust, and in the result it was not considered conclusively proved that an inexplosive mixture of gas and air could be rendered explosive by the addition of coal.

Parliamentary Jottings.

THE SALE OF FOOD AND DRUGS.

In the House of Commons last week Mr. Long asked leave to introduce a Bill to amend the law relating to the sale of food and drugs. It dealt with the two subjects in one Bill. The first part had to do with dairy products, and extended the operation of the measure to cheese as well as butter, &c. It took power to deal with all these matters at the port by inspection, and power was given to make rules regulating analyses. The Bill imposed a limitation of the amount of admixture of butter with margarine. In relation to food and drugs, cumulative penalties would be imposed for the second and third offences. It was made obligatory that a foreign warranty should not be admitted as an excuse, unless reasonable steps had been taken to ascertain that the facts were as stated.

The Bill was read the first time.

PATENT AGENTS.

On Monday, Mr. A. G. H. Gibbs asked the President of the Board of Trade whether the Government had it in contemplation to introduce a Bill framed on the lines of the Patent Agents Registration Bill of 1894 as amended by the Select Committee; or, if not, whether he would carry out the recommendations contained in page 6 of the report of that Committee—namely, that unless the bill as amended, or some measure on similar lines, should become law at an early date the Board of Trade should remove the register and the appointment and control of the registrar and the examinations from the Chartered Institute of Patent Agents, and make other arrangements to carry out the provisions of section 1 of the Act of 1888.

Mr. Ritchie: No. I must refer my hon. friend to a reply which I gave to a question put by the hon. member for the Strand, on March 4th last. The position of affairs is unchanged. The Board of Trade recommended amendments to the by-laws submitted by the Institute under their charter framed so as to enable members of the profession of patent agents not members of the Institute to enter that body and so obtain a position to take part in the government of the profession as a whole. If the proceedings under the by-laws still in progress do not prove to have a satisfactory result, the Board reserve the power to take other action.

SOCIETY OF CHEMICAL INDUSTRY.

PRESIDENT'S VISIT TO MANCHESTER SECTION.

The members of the Manchester section of the Society of Chemical Industry dined together on Friday last week, at the Albion Hotel, Piccadilly, in celebration of a visit paid to them by the President of the Society, Mr. George Beilby. There was a large attendance, and the gathering was presided over by Dr. David Watson, chairman of the Manchester section. In proposing the health of the guest of the evening, the Chairman spoke of the numerous departments of the chemical industry represented by the Manchester section, and appealed to the members to attend the meetings more regularly and to join in the social meeting which preceded the reading of the papers, and in the discussions which followed the papers. There were too many of them who were content to read the reports of the proceedings in the "Journal" of the Society. He felt sure that if they knew the pleasure and the benefit to be derived from the meetings they would attend them in still larger numbers. He believed that the visit of their president, Mr. Beilby, whom they were all glad to see amongst them, would help to stimulate interest in their proceedings. Dr. Hewitt (Northwich) and Mr. George E. Davis supported the toast. Dr. Hewitt said that in the case of a society like theirs, with branches all over this country and also a branch in New York, they were apt to forget that they were members of one great body, unless they had some connecting link. Such a connecting link they had in their president. Apart from his work as president, Mr. Beilby had done a very useful service by his utilisation of the distillation products of shale. The comparatively useless shale, which they sometimes resented having sent to them instead of coal, Mr. Beilby had made to yield that ammonia which the President of the British Association said we were getting short of. Had Mr. Beilby done nothing else he had in that done something to make him known all over the scientific world.—Mr. Beilby, who was received with cheers on rising to reply, expressed the pleasure with which he found himself in the city in which the great society with which they were connected had its beginnings. He regarded the Manchester section as one of the most vigorous and successful sections of the Society. He considered that the Society generally, through its sectional work and the "Journal," had fully accomplished all that was anticipated for it when the Society was formed in Manchester. But they must not rest content with what they had done, much as that had been. And as to the future, there was one thing he commended to their attention. They had allowed the subject of

CHEMICAL ENGINEERING

to fall strangely out of sight, and he suggested that it should be placed in the position of importance to which it was entitled. They ought to endeavour to inform their universities and colleges much more distinctly than they had ever done what it was that chemical manufacturers most desired in their chemists and in the leaders of their works—that was to say they should educate them to a certain extent in what the science of chemical engineering really meant. His idea was that for this purpose it would be well to establish lectureships in the construction and design of chemical plant, lectureships on the lines of the Howard and Cantor lectures in London. He trusted that Manchester would play its part in this movement, which he had very much at heart.—The toast of "Success to the other sections," proposed by Sir Thomas Wardle, was acknowledged by Mr. Smetham and Dr Kohn, representatives of the Liverpool section.—A musical programme was provided, of which a special feature was a song descriptive of the charms of Widnes.

NOTTINGHAM SECTION.

The fifth meeting of the session was held at the George Hotel, Nottingham, on Wednesday the 22nd ult., when, at the request of Mr. J. O'Sullivan, the chairman of the section, Mr. George Beilby, the President of the Society, occupied the chair. Amongst the members present were: Messrs. T. H. Adams, J. B. Alliott, L. Archbutt, S. F. Burford, F. J. R. Carulla, R. M. Caven, H. S. Garry, J. Golding, R. Hamilton, F. S. Kipping, D.Sc., F.R.S., L. Meggitt, J. M. C. Paton, S. J. Pentecost, H. J. Staples, J. Stirk, J. J. Sudborough, D.Sc, S. R. Trotman, G. J. Ward, J. Ward, J. T. Wood (Hon. Sec.), etc.

Mr. L. Archbutt read a paper entitled a "Note on Maize Oil," which evoked an interesting discussion, mostly in regard to the grain itself. The President said that the presence of the oil in the grain rendered it unsuitable for the distillation of whisky. Mr. O'Sullivan pointed out that the oil was largely present in the germ of the corn. Mr. Stirk said that there would still be a considerable quantity of oil left after the removal of the germ, as this only contained about 75 per cent. of the total quantity. A question being put as to how the germ could be removed, Mr. Carulla suggested that it might be rolled out in the same way that the germ of wheat is separated from the flour. Mr. Paton explained that the process referred to was hardly one of rolling but rather one of crushing, as the rollers were fluted. The germ, however, came out in a flattened condition, so that it could easily be separated from the flour by sifting. Mr. Golding remarked that there was a cake used for agricultural purposes made from what he believed to be the germ of maize. Mr. Archbutt shortly replied, and was thanked for his interesting paper.

The meeting then closed, and the members and visitors attended

THE ANNUAL DINNER,

at which Doctor Clowes had intended to be present. A slight indisposition had, however, much to his regret compelled him, by the advice of his medical attendant, to remain in London. After an excellent repast and the usual loyal toast, the President proposed "Success to the Nottingham Section." He said that it would be remembered how Mr. Gladstone frequently managed to connect himself with various localities. In imitation of the renowned statesman, he (Mr. Beilby), could say that he had been born in Nottingham, that is as President of the Society, for was it not at the recent annual meeting, in their city, that he had been elected? He, therefore, naturally followed the fortunes of their section with considerable interest. It might be true that it was a small section, but he was pleased to note the varied character of the contributions to the Society's Journal by its members. These represented a large number of interests. There were the Professional, connected with University College, the brewing interest, the engineering industry so important in chemical manufactures, and many others. The section, if small in numbers, extended over a wide area, and by moving about as it had done, had set a good example to the other sections which he himself had not been slow to imitate, he hoped with beneficial results to the Scottish Section. There was one thing to be regretted, however, in connection with the sections, namely, that their representation was not as effective in the council as could be desired, and as it was intended that it should be. It was frequently said that the work was done by the London members of the council, but of necessity it had to be done by those who attended the meetings. It was desirable that this should be counteracted by the sections electing those members to the chair, and as their secretaries, who could devote the necessary time to these duties. He was pleased to say that the council desired that no geographical obstacles should stand in the way of the proper representation of the sections at their meetings, and to this end they were considering the question of defraying the travelling expenses of the accredited delegates from the funds of the society.

Turning now to the society as a whole, he would like to see it occupy

A POSITION OF GREATER AUTHORITY.

He would like, for instance, to see it doing work on somewhat similar lines to those of the Society of Arts with its Cantor lectures. There is a vast difference between the requirements of the laboratory and the needs of the manufacturer in the works. The lectures might be given in London or in the Provinces, but in any case their publication in the Journal would make them reach every member of the society. One course might be devoted to the construction of mixing machinery, to the various forms of distilling apparatus, and to appliances for evaporation and concentration of liquids. This was only to give an idea of what he meant. Though straying a little from the subject of the Nottingham Section, he thought this was a matter that deserved the consideration of its members equally with those of the other sections. He was pleased to drink "To the Success of the Nottingham Section," coupling with the toast the name of Mr Paton.

Mr. J. M. C. Paton, in replying, said that they certainly laboured under the disadvantage of being a small section, still a small baby could sometimes make a big noise (laughter). Something had been said by the President in reference to their moving about, but he might mention, as having had something to do with the excursions during the recent annual meeting, that there were difficulties connected even with such laudable intentions. He had, for instance, been accused of poaching on the preserves of the Yorkshire section by going to Sheffield (laughter). He quite concurred with what the President had said about lectureships, but the financial question was an important one in any such scheme. Where was the money to come from? He had had a word with his partner, Mr. Alliott, on the subject, and they were ready as a firm to subscribe

ONE HUNDRED GUINEAS TO START THE FUND

if the idea took shape. With a man like Mr. Beilby to urge it forward there was no doubt but that it would come to something (applause).

The President said that there were in America what were called surprise visits, and he had to confess that this visit had been to him one full of surprises. A very pleasant one was the duty that now devolved upon him in connection with the

PRESENTATION TO MR. J. T. WOOD,

their hon. sec, of a handsome dessert set, towards which the members of the section had subscribed, in recognition of his services during the recent annual meeting of the society in Nottingham. He (the President) could personally vouch for the assiduity of Mr. Wood on that occasion, and the excellent arrangements that were made for the convenience of the members left nothing to be desired. Mr. Wood, he believed, was the only sectional secretary actually engaged in industrial operations, and his contributions to the Journal were highly valued. He had much pleasure in asking Mr. Wood to accept a present which, he understood, might have been much more important had not the subscriptions been purposely limited so as to give every member the opportunity of showing appreciation of Mr. Wood's services (applause).

Mr. Wood, whilst thanking the members for their kindness, felt so conscious of his own shortcomings that he said it had come upon him as a painful surprise when he heard of what was being done a few days ago. In regard to the business of the section, he had to thank Mr. Pentecost for much help, and he had been fortunate in serving under chairmen who had its interests at heart. From Dr. Clowes, whom he was sorry not to see at their dinner, he had also received much help. He again thanked the members most heartily for their appreciation of his efforts.

Mr. Archbutt, in proposing the toast of "The Visitors," said he regretted not to see ladies present, as if that had been the case they might personally have been able to convey the thanks of the section to Mrs. Wood. They all knew how that lady helped her husband in conducting the business of the section. It was thought fitting, therefore, that she should share in the merited honour. He hoped they might live many years in happiness together. He regretted that he was not acquainted with any of the visitors, but as industrial chemists were nothing if not practical, in drinking to their health he would ask them all to join the society. Mr. Crawford responded for the visitors.

Dr. Kipping proposed "The Chairman," to which Mr. Beilby briefly responded. The proceedings were interspersed during the evening with musical selections by members and their friends

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The New Conveyor Company, Limited.—From time to time we have chronicled the progress made by this firm, and although there have been abundant signs of development, the diagram which we reproduce in our advertisement columns (page 8) and which has been prepared by the Company, affords a good idea of the comparative progress made during the past eight years, in the three principal branches of the firm's business. Recently a new catalogue was issued, and we cannot do better than commend all who are in need of facilities for the transport of crude and finished products to write for a copy, as they can scarcely fail to gather some helpful ideas or useful information after spending an hour or so in looking over this catalogue.

Trade Notes.

The Electrolytic Patents Case.—On Tuesday, in the Court of Appeal, before the Master of the Rolls and Lords Justices Rigby and Vaughan Williams, the case of the Castner-Kellner Alkali Company, Limited, *v.* the Commercial Development Corporation, Limited, who carry on business at Charlton, with interests in Birmingham and elsewhere, was heard on appeal by the defendants from an order of Mr. Justice Bigham, sitting as a Judge of the Chancery Division. At the time of going to press the case was proceeding.

Obituary.—It is with sincere regret we have to record the death of Mr. Harry Allen, head of the famous steel firm of Bessemer and Co, from pneumonia after two days' illness. He was under forty years of age, and would in September next have been installed Master Cutler. The funeral took place at Sheffield last Saturday.

The British Fire Prevention Committee.—This Committee, the establishment of which was the outcome of the Paris Charity Bazaar and Cripplegate fires, has now become a fully incorporated scientific society under the special sanction of the Board of Trade, and will rank as such from March 1st. The rapid development of the Committee is mainly due to the energy of its Executive, led by Mr. Edwin O. Sachs, and to the influence of its Council. Its scope is again being extended, another important section, dealing particularly with the safety of factories and workshops being formed.

Society of Chemical Industry: *Manchester Section.*—The fifth meeting of the session took place on Friday, March 3rd, 1899, at 7 p.m, in the Rooms of the Chemical Club, Victoria Hotel, when the following paper was read—"The Diagnosis of a Cause of Local Failure in Chemical Lead;" by George E. Davis, F.I.C., etc. The annual general meeting of the members of the Section will be held on Friday, April 7th, 1899, in the Rooms of the Chemical Club, Victoria Hotel, Manchester, at 7 o'clock in the evening, to fill the vacancies caused by the retirement of members of the committee, to elect the auditors, to receive the accounts of the secretary, and to transact such other business as may arise in connection with any of the foregoing. Five ordinary members of the committee retire and are not eligible for re-election. Members are invited to send in their nominations to the secretary to fill these vacancies, on or before Thursday, March 23rd, 1899. Nominations for the posts of auditors must also be sent in by the same date.

The Affairs of Messrs. James Samuelson and Sons, Ltd.—A meeting of creditors and shareholders of James Samuelson and Sons, Limited, carrying on business as seed crushers and oilcake manufacturers, at the Wallasey Oil and Cake Mills, Birkenhead, has been held at the offices of Messrs. Harmood, Banner and Son, chartered accountants, Liverpool. A statement of affairs was submitted which showed on the asset side a total of £72,168. 11s. 10d. This included debts considered good of £8,892, stock at mills, £10,200, and freehold and leasehold mills at Wallasey, with plant and machinery, £52,702. It was explained that the last item was taken at the book value. The liabilities were returned at a total of £65,268. 0s. 9d., including £9,600. to debenture holders, £837. to preferential creditors for wages, rent and taxes, £53,231. to unsecured creditors, and an estimated liability on contracts of £1,600. The foregoing figures of course do not include the liability on capital account to shareholders, which is thus returned—488 shares of £100. each, fully-paid, £48,800. Mr. Eshelby, of Messrs. Harmood, Banner and Son, having made explanations upon the accounts, a discussion ensued, and a resolution was ultimately adopted unanimously in favour of voluntary liquidation, with Mr Lloyd Rayner as trustee, and a committee of inspection, the trustee and committee to take charge of the mill and work it to the best advantage of all concerned.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols continue dull at 8d. for both qualities, and apart from contract deliveries there is next to nothing doing. There are no changes in the prices of carbolic acids or naphthas, the position of all grades remaining unaltered since the last report. Anthracene is looking up a little, prices being 3½d. to 4d. for 30 % A, and 2½d. to 3d. for B. Pitch firm at 25s. f.o.b. East Coast.

Sulphate of ammonia is firm and dearer. Buyers are more plentiful, and stocks being low, prices have responded to the demand. Closing prompt values are:—Beckton, £10. 5s.; London (outside makes), £10. 6s. 3d. to £10. 7s. 6d.; Hull £10. 5s.; and Leith £10 7s. 6d. For forward, business is rather quiet.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade the tone of the market continues satisfactory, and there is a good demand, both for home and export account, for all the main products. Bleaching powder is in more active request, and price is steady at £4 2s. 6d. to £4. 5s per ton, softwoods, f.o.r., and £4. 15s. to £5., hardwoods, f.o.b. Chlorates of potash and soda are unaltered at 3½d. and 3¾d. per lb. respectively. In ammonia alkali, 58 %, the makers are busy, and there is no change in the quotation for home trade, viz., £3. 17s. 6d., bags, f.o.r. Soda crystals and bicarbonate are equally steady in value. For caustic soda the quotations are firm, f.o.b. Liverpool, at 77%, £7. 12s. 6d; 74%, £7. 7s. 6d.; 70%, £7.; 60%, £6. per ton, 10 ton lots. Sulphur, £4. 11s. 3d. per ton, f.o.r. For saltcake there is a continued good inquiry, and price firm, in bulk, at 30s., f.o.r. Lancashire works. Glauber salt, 30s. per ton, bags. Sulphate of copper rather lower at £23 10s., f.o.b., due to end of the month re-sales. For potash, caustic and carbonate, the demand is good, and prices are firm; carbonate, 90 %, at £15., and caustic, 90 %, £22 per ton. Yellow prussiate of potash slightly easier during the week, but is now steady at 7½d. per lb. For brown acetate of lime, quotations are lower at £4. 17s. 6d. to £5 per ton, ex ship; grey firm at £7. 15s. to £8. per ton. Acetic acids are unchanged. Acetate of lead, foreign white, £25. 15s to £26., c.i.f.; nitrate of lead, £22. 10s. to £23. per ton. Arsenic firm at £16. 10s. per ton, with advancing tendency. For aniline oil and salt, demand is quiet, and values unaltered. Carbolic acid, crystals and liquid, are in a similar position. Sulphocyanides are neglected. Borax is steady at £16. to £16. 10s. per ton. Nitrate of soda dearer at 8s per cwt. Zinc and tin salts are more firmly held for advanced prices. The demand for chemicals for use in the textile trades is only moderate, and prices generally are at a low range.

THE METAL MARKETS.

LONDON, Wednesday.—Pig iron steady: Scotch warrants closed at 53s. 11½d.; Middlesbrough, 47s. 7d. cash; and hematite, 58s. 11½d. Copper steady: Chili bars, G.O.B.'s and G.M.B.'s, closed at £71. 10s. to £71. 15s. cash, and £71. 5s. to £71. 10s three months. Tin firm: Straits closed at £107. 17s. 6d. to £108. 7s. 6d. cash, and £107. 15s. to £108. 5s. three months; Australian, £108. 13s. 9d.; English ingots, £111. Lead quiet: Spanish, £14.; English, £14. 5s.; Silesian spelter, ordinary, £27. 15s. to £27. 17s. 6d. Nickel, 1s. 2½d. Antimony, £38. 10s. Quicksilver: First hands, £8. 5s.; second hands, £8. 4s. *Copper shares* steady: Cape, 4⅛ to 4¼; Copiapo, 3 to 3¼; Libiola, 2⅛ to 2⅜; Mason and Barry, 3¼ to 4; Rio Tinto, 39¾ to 40; Tharsis, 8 1/16 to 8 1/16.

GLASGOW, Wednesday.—Market irregular, with a good business. Scotch done at 54s., 54s. 1d., and 53s 11½d. cash; also at 54s. 2½d., 54s. 3½d., and 54s 2½d. month; buyers, 53s. 11½d. cash; sellers, 54s. Cleveland done at 47s. 7½d. cash, and 47s. 10d. month; buyers, 47s. 7d. cash; sellers, 47s. 8d. Cumberland hematite done at 59s. to 59s. 1d. cash; also at 59s. 3d, 59s. 3½d., and 59s. 3d. month; buyers, 58s. 11½d. cash; sellers, 59s Middlesbrough hematite idle.

LIVERPOOL OIL AND COLOUR MARKET.

Wednesday.

OILS.—Palm oil is fairly steady, Lagos being the exception, having experienced a drop of 5s. Olive is steady, but the demand is rather weak, with Spanish at £31. 10s. to £32. per tun. Linseed firm at 19s. 3d. to 19s. 6d. cwt. for Liverpool makes in export casks. Cottonseed is quoted 16s. 6d. to 17s. for Liverpool refined. Castor oil is quiet on spot, but near futures show more activity; for prompt, Calcutta figures at 2 15/16d; first pressure French, 2⅞d.; and Madras, 2¾d. per lb. Tallow firm, full prices prevailing. Resin firmer for all grades, with a moderate business doing. Spirits of turpentine are dull at 33s. cwt. Petroleum quiet, with American at 6⅝d. to 8d., and Russian refined, 5⅝d. to 6d. per gallon.

CAKES.—There has been a shade more inquiry for American W[illegible]d, with sellers at £6. 10s. to £6. 17s. 6d., but only a sm[all] [am]ou[nt] [ha]s been c[on]cluded in other imported descriptions, though sellers offer[ed] Bombay at £7. to £7. 5s., and Russian at £7. 5s. to £7. 7s. 6d per ton, River Plate being nominal in the absence of supplies here. Home crushers were rather disappointed with the demand for Liverpool makes, but the quotation remains without alteration at £8 to £8 10s. per ton, according to brand. Good to choice brands of American decorticated cottonseed have attracted rather more notice from buyers, and the quotation is still given at £5. 15s. to £6., according to quality, and Liverpool makes are also steady, with a moderate inquiry, at £6 7s. 6d. to £6. 15s. per ton, according to brand. Undecorticated Liverpool makes were barely steady in tone, with sellers at £4. 15s. to £5. 5s. per ton, according to brand, but buyers operated to only a moderate extent thereat. The quay has been cleared of the recent arrivals of Egyptian, and the market is steady at £4. 10s. per ton for sound, but the demand is rather slow, business being limited at the quotation.

COLOURS.—Prices are steady, and practically without change. Ochres: Oxfordshire—common £10., medium £12, best £15.; Derbyshire—common 40s., medium 50s., best 60s.; Welsh—best 9 s., seconds, 50s., and common, 18s.; Devonshire, 40s. to 45s.; French, J.C., 65s. Umber: 40s. to 45s. White lead: £16. Red lead unchanged. Venetian red: £6. to £10. Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7.; medium, £10.; finest, £20. Zinc oxide: £22. 10s. to £25.;

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—Business has been better and prices advanced, but they have receded again. The imports of linseed have increased, so have foreign-made cakes, which are practically all linseed cakes. This is not a very satisfactory feature. Cottonseed, however, lags a long way behind in the quantity imported. The imports here to date as against the same time a year ago have been—wheat, 317,367 qrs. against 295,398 qrs.; flour, 86,300 cwts. against 32,753 cwts.; linseed, 60,001 qrs. against 46,224 qrs.; rapeseed, 13,335 qrs. against 16,927 qrs.; cottonseed, 31,615 tons against 62,603 tons; oilcake, 4,621 tons against 3,056 tons; olive oil, 442 tuns against 640 tuns; tar, 810 barrels against 607 barrels. Linseed oil is steadier at 17s. 4½d., spot, naked; March/April, 17s. 1½d.; May/August, 16s. 3d.; last four months, 15s. 10½d. to 16s.—boiled and refined £1. to £1. 10s. per ton extra. Refined cotton oil steady: 14s. 3d. spot, and same being the quotation to April; 14s 9d. to 14s. 10½d. May/August—barrels £1. 10s. and ordinary casks £1. per ton extra. Castor oil, extracted here, cold drawn pure pharmaceutical, 28s. 6d. per cwt. in barrels, 3⅜d. per lb. in cases; pure first pressure, 26s. in barrels, in cases 3⅝d. per lb.; seconds, 25s per cwt., in cases 2$\frac{15}{16}$d. per lb. Turpentine and resins unchanged Olive oil not much offering. Olive oil soap £16. per ton. Cod oil £16. to £18. per ton. Oleines firm, from £19 per ton. American pail lard 31s. to 32s. per cwt. Danish butter, also Swedish, 106s. to 112s.; Dutch, 104s. to 112s.; Colonial, 98s. to 106s. per cwt. Cakes: Feeding stuffs in good demand. Linseed cakes firm: 95% pure £8. to £8. 5s.; oilcakes (linseed), £7. to £7. 5s. per ton; Russians, £7. to £7. 15s. Cotton cakes steady: best makes, £5. 5s. to £5. 7s. 6d.; seconds, £5. to £5. 2s. 6d.; decorticated, £6. 10s to £6. 12s. 6d. Rape cake: Black Sea, £4. 2s. 6d.; East India, £5.

PAINTS.—The market is an improving one, but what effect the strike in the building trade now imminent may have upon the demand remains to be seen. Leads are about 10s. to 15s. per ton dearer. Colours in oils from £10. per ton. Ready mixed paints from £22. per ton. Dry colours from £4. per ton upwards.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

The somewhat improved tone of late prevailing in the common chemicals remains discernible, and the tendency that way may even be said to have become a little more marked. There are no changes in the price quotations of these heavy chemicals, but orders are more easily placed, and forward arrangements are more readily entered into on the part of consumers. Last week's signs of recovery in sulphate of ammonia did not prove delusive, and by the end of the week the figure of the close of January was regained, viz., £10. 7s. 6d., f.o.b. Leith, which is the price to-day and pretty firm at that. Nitrate of soda also is dearer. Sulphate of copper holds at last week's top price but the ascent seems checked for the moment and some leakage is not unlikely. The products of the mineral oil industry are all fairly steady at the old prices. The season's call for burning oil will now diminish rapidly.

Chief prices current are:—Soda crystals, £2. 5s.0d to £2. 7s 6d. basis nett, Tyne; soda ash, £4. 2s. 6d. to £4 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 5s. to £4. 15s. nett, Glasgow; caustic soda, white, 74° £7. 7s. 6d, 70/72° £6. 17s. 6d., 60/62° £6., and cream 60/62° £6., all nett, Liverpool; bleaching powder, 35/37°, £5. to £5. 10s. nett, Tyne; saltcake, 30s. od.; borax, English refined, £16., and boracic acid, £26. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s., nett, Liverpool; bichromate of potash, 3¼d., less 6% for Scotch and English deliveries (for export, 3¼d nett, f.o.b. Glasgow); bichromate of soda, 2¾d., less 6% for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow); chlorate of potash, 3½d., less 5% Liverpool; nitrate of soda, 8s. od. to 8s. 3d.; sulphate of ammonia, £10. 7s. 6d. prompt f.o.b. Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £24. 10s., less 5% Liverpool; paraffin scale, hard, 1⅞d. to 2d. per lb., and soft 2d. per lb.; paraffin wax, 120° semi-refined, 2¼d. to 2½d. per lb.; paraffin spirit (naphtha), 9d. to 10d. per gal.; paraffin oil (burning), No. 1, 6½d.; and crystal, 7d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 15s. to £5. 5s., 885° £5. 10s. to £6., and 890/895° £6. 5s. to £6. 10s. Week's imports of sugar at Greenock were 14,074 bags beet unrefined.

TYNE CHEMICAL REPORT.

TUESDAY.

Chemicals continue quiet, without any new feature to report. Bleaching powder continues steady at £5. 5s. Soda crystals are £2. 12s. 6d. per ton, gross weight locally. Caustic soda, 70%, £7., and 76/77%, £7. 15s. to £8. per ton. Sulphur scarce at £4. 15s. per ton, nett.

Bleaching powder, softs, £5. 5s. per ton, nett; do., hards, £5. 10s. per ton, nett; caustic soda, 76/77%, £8. and 70%, £7. 0s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do, 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75°Tw., £2. 12s. 6d. per ton, nett; do., 100°Tw., £3. per ton, nett; do., 140°Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. od. per ton, nett; blanc fixe, £6. 10s. per ton nett; chloride of barium, refined crystals, £6. 15s. od. per ton, nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt firm at 9s. 6d. per ton, f.o.b. Tees.

COALS.—The prices for Northumbrian steam coals are 10s. 9d. to 11s. Gas and bunker coals are somewhat quiet. Manufacturing coals and coke are unchanged.

New Companies.

Guano Promotion Syndicate, Ltd.—CAPITAL £2,000. in £5. shares. This company has been formed to adopt an agreement with Dawson and Co., and to seek, work for, acquire and deal in guanos, nitrates, asbestos, phosphate deposits, etc. The number of directors is not to be less than 3 nor more than 5; the subscribers are to appoint the first; qualification £100.; remuneration £50. each per annum and a share in the profits.

James Clark and Son, Ltd.—CAPITAL £60,000 in £10. shares. This company has been formed to adopt an agreement with J. Clark for the acquisition of the business of James Clark and Son, and to manufacture, sell, and deal in glass and other vitreous substances, bricks, earthenware, chemicals, etc. The subscribers to the memorandum of association are:—J. Clark, Broadlands, Streatham, plate glass factor; Mrs. E. M. Clark, Broadlands, Streatham; Mrs. E. B. Warton, 16, Cantley Avenue, Clapham, S.W.; Mrs F. S. Clark, Heatherbank, Ambleside Avenue, Streatham; Mrs. E. L. Millard, 186, Brixton-road, S.W.; S. E. Clark, Broadlands, Streatham, plate glass factor; C. J. Clark, Ambleside Avenue, Streatham, plate glass factor.

Oxygen Sewage, Ltd.—CAPITAL £5,000. in £1. shares. This company has been formed to acquire and deal with certain British Patents connected with the Oxygen System of Sewage Purification, and to enter into an agreement with the Oxygen Sewage Purification Co., Ltd. The number of directors is not to be less than 3 nor more than 5; the first are J. T. Spencer, W. K. Parry, G. W. Robinson, C. Waistell, and D. Woodhead; qualification £100.; remuneration £100. per annum and a share in the profits divided.

1899 Tar Products Sales Committee, Ltd.—CAPITAL £30,000. in £1. shares. This company has been formed to carry on business as dealers in tar and tar products, and as warehousemen, brokers, forwarding and insurance agents, carriers, etc. The subscribers to the memorandum of association are:—F. Lennard, 70, Gracechurch-street, E.C., chemical manufacturer; H. Boulton, 64, Cannon-street, E.C., chemical manufacturer; C. D. T. Bushell, West Bromwich, tar distiller; J. B. Butler, St. George's, Bristol, chemical manufacturer; T. G. Holmes, Commercial Buildings, Leeds, tar distiller; O. Boulton, 64, Cannon-street, E.C., tar distiller; T. S. Boulton, 64, Cannon-street, E.C., secretary. Registered office, 23, College Hill, E.C.

Titan Soap, Ltd.—CAPITAL £65,000. in £1. shares (30,000 5½ per cent. cum. pref.) This company has been formed to adopt an agreement with F. O. Kloninger, and to manufacture, sell, and deal in soap and chemical, medicinal, and toilet articles. The subscribers to the memorandum of association are:—W. Milburn, 9, Claremont-road, Egremont, cashier; W. Pugh, 4, Croxteth Avenue, Liscard, Cheshire, bookkeeper; J. H. Herbert, 11, Lord-street, Liverpool, clerk; E. F. Lambert, 9, Clarendon-road, Egremont, Cheshire, clerk; J. Scott, 122, Duke-street, Liverpool, contractor; W. Mazefield, Kent-street, Liverpool, preserve manufacturer; J. M. Siegers, Angel Hotel, Liverpool, gentleman. Registered office, 54, Naylor-street, Liverpool.

Gazette Notices.

PARTNERSHIP DISSOLVED

J. Wood & G. E. Swindells, chemical manufacturers, Manchester, under the style of James Wood & Co.

IMPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.

Week ending February 18th.

Acetic Acid—
Holland, 30 pks. Phillips & Graves
Acetone—
Germany, 34 dms. E. Catlin
France 20 ,,
Belgium, 5 ,,
Holland £50 T. H. Lee
Alkali—
France, 2 t. 10 c. J Barber & Co.
Germany, 10 ,,
Alum—
Germany, 100 pks. R. W. Greeff & Co.
Ammonium Muriate—
Holland, £36 H. Lorenz
Antimony Ore—
China, 1 t. Lon. & Til Ltge. C. & D. Co., Ld.
Italy 35 Novelli & Co.
Barium Chloride—
Germany £60 Petri Brs.
Baryt s—
Germany, 101 pks. W. Harrison & Co
,, 194 J. L. Lyon & Co.
,, 38 Wilkinson, Heywood & Co.
Belgium, 1,373 J L. Lyon & Co.
Bleaching Powder—
France, 56 cks. J. M. Steel & Co.
Calcium Carbide—
Belgium £200 Fisher, Renwick & Co.
Caoutchouc—
Straits, 54 c. E. Boustead & Co.
P. E. Africa, 17 L. & I. D. Jt Co.
Cape, 17 J. Owen
Congo, 10 W. A. Collins
Germany, 6 Wallace Brs.
Zanzibar, 32 L. & I. D. Jt. Co.
,, 6 Hale & Son
France, 43 H Johnson & Sons
Germany 7 L. & I. D. Jt. Co.
Straits, 170 ,,
P. E. Afri a, 56 Hale & Son
Zanzibar, 24 Clarke & Smith
Castor Oil—
Italy, 60 cs. A. Zumbeck & Co.
,, 25 Barron, Harveys & Co.
,, 37 pks. Fellows, Morton & Co., Ld.
France, 70 brls. L. & I. D. Jt. Co.
Italy, 3 cs. Potter & Clarke
U. States, 30 J. W. Fergusson
,, 35 Stebbing & Co.
Caustic Potash—
Germany, 17 dms. Petri Brs.
Chemicals (*otherwise undescribed*
Germany, £300 J. Norrenberg & Co.
France, 19 J. Harrison
Germany, 50 Craven & Co.
,, 1,340 Drolenvaux & Bemner
,, 323 A. & M. Zimmermann
,, 480 L. & I. D. Jt. Co.
Sydney, 85 H. Hill & Sons
U States, 503 S. C. Jones
Belgium, 460 T. H. Lee
U. States, 440 B. & F. Wf. Co., Ld.
Belgium, 32 John Cockerill Line
France, 17 Mory & Co.
Germany, 287 H. Lambert
Holland, 15 Hernu Peron & Co.,
Belgium, 143 T. Palmer
Norway, 154 R. Greening
France, 9 White Bros.
Belgium, 10 T. Ronaldson & Co.
Chrome Ore—
Sydney, 165 t. T. H. Lee
Citrate of Lime—
Italy, 19 cks. B Jacob & Sons
,, 74 Thames S T. & L. Co., Ld.
,, 22 W. C. Bacon & Co.
,, 11 Fellows, Morton & Co., Ld.
Copper Sulphate—
U. States, 274 brls. J. Owen
Cream of Tartar—
Holland, 40 pks. Kirkpatrick, Barr & Co.
France, 5 W. Balchin, Ld.
,, 8 F. C. Devon & Co.
,, 5 C. Atkins & Nisbet
,, 5 M. Ashby, Ld.
,, 2 H. Johnson & Sons
,, 22 W. C. Bacon & Co.
Disinfectants—
Germany, £40 A. & M. Zimmermann
U. States, 46 cs. Lunham & Moore
Dried Blood—
U. States, 40 t. West & Penrose
Dyestuffs—
Argols
France, 50 pks. B. & F. Wf. Co.,
Italy, 845 B. Jacob & Sons
Spain, 40 Thames S. T. & L. Co., Ld.
Cochineal
Canary Is., 24 pks. W. M. Smith & Sons
,, 4 Hendrey & Martin
,, 47 L. & I. D. Jt. Co.
Extracts
France, 80 pks. Leach & Co.
,, 50 B. & F. Wf. Co.,
Austria, 102 Fellows, Morton & Co.
,, 200 Boutcher, Mortimore & Co.
,, 102 Bellamy's Wf., Ld.
Holland, 1 Phillipps & Graves
Gambier
Straits, 1,003 pks. Hoare, Wilson & Co
,, 502 Adamson, Gilfillan & Co.
,, 904 S. Figgis & Co.
,, 3,347 P. & O. Co.
,, 271 J. W. Cook & Co., Ld
,, 1,024 Brown & Elmslie
Indigo
Belgium, 1 cs. John Cockerill Line
Holland, 16 Lon. & Til. Ltge. C. & D. Co., Ld
A. Turkey, 11 chts. J. Owen
Holland, 1 L. & N. W. Ry. Co.
E. Indies, 35 E. Bower & Co.
,, 1 R. Von Glehn & Sons
,, 51 Kahlenbach & Schmitz
,, 10 J. Owen
,, 36 Arbuthnot, Latham & Co.
,, 23 J. W. Cook & Co. Ld
,, 17 Ralli Brs.
,, 9 L. & I. D. Jt. Co.
,, 5 Croysdale & Co.
Saffron
Spain, 1 pk. J. Barber & Co.
Shumac
Italy, 500 pks. J. Kitchen, Ld.
,, 50 W. W. Ware & Co.
,, 20 A. Allan & Co.
Tanners Bark
Natal, 24 t. A. & W. Nesbitt
,, 30 Union L Co., Ld.
,, 3 J. T. Rennie, Son & Co.
,, 4 Flack, Chandler & Co.
Belgium, 12 Leach & Co.
Tumeric
China, 70 pks. R. Warner & Co
E Indies, 182 Wallace Bros
Valonia
A. Turkey, 25 t. T. W. Beard
Farina—
Holland, 300 pks. J. Barber & Co.
Germany, 50 J. Knill & Co.
,, 200 R. Bennett & Co.
France, 3 H. Ewald & Co.
Italy, 2 L Terroni
France 3 Mory & Co.
Holland, 10 R. Bennett & Co.
U. States, 350 ,,
Germany, 10 H. Lambert
,, 50 Mulder & Vander
Italy, 15 Bodega Bros
Glucose—
U. States, 30 pks 180 cwts. Fellows, Morton & Co.
,, 500 500 C. Barnard
,, 250 1,588 Lipton. Ld.
,, 150 825 Ohlenschlager Bros.
Germany, 100 8,8 Beresford & Co.
,, 1 5 Stein Bros.
U. States, 50 300 Vokins & Co.
,, 210 1,210 W. Grose & Co.
,, 50 300 Page, Son & East
,, 250 250 G. Hedges & Son
France, 1,320 1,320 W. E. Cole
,, 260 260 Trier, Meyer & Co.
U. States, 1,500 1,500 G. Clark & Son
,, 1,000 1,000 Union Ltge. Co.
,, 100 500 Lucas & Spencer's Wf., Ld.
,, 1,300 1,300 Pearce, Petly & Co.
,, 100 315 Phillipps & Graves
,, 130 560 L. Norman & Co., Ld
,, 1,000 1,000 E. Thompson & Co.
Germany, 12 90 J. Knill & Co.
U. States, 1970 3,130 R. G. Hall & Co.
,, 100 Deering & Robottom
Germany, 13 M. D. Co.
Glue—
Italy, £70 Drew & Stiebel
,, 140 Sander & Knott
Germany, 255 L. & I. D. Jt. Co.
,, 265 T. M. Duche & Sons
Italy, 165 ,,
Holland, 500 J. Barber & Co.
Germany, 30 H. Lambert
,, 12 Argo S. S. Co.
Belgium, 15 Leach & Co
,, 203 T. Ronaldson & Co
,, 83 J. E. Kitton
France, 330 Mory & Co.
U. States, 90 L. & I. D. Jt. Co.
Belgium 1,3 5 T. M Duche & Sons
Germany, 300 Butler's Wf., Ld.
Holland, 93 T. H. Lee
Glycerine—
France, £300 H. Hill & Sons
Holland, 440 J. Barber & Co.
Gutta Percha—
Straits, 3 t. Kleinwort, Sons & Co.
,, 13 A. B. Curtis & Co.
Holland, 56 c. Anderson, Weber & Smith
Gypsum—
Germany, 30 t Brasch & Rothenstein
Kainit—
Germany, 150 t. F. W. Berk & Co., Ld.
Lead Acetate—
Germany, 23 pks. F Bochin
Lime Acetate—
U. States, 1,245 bgs. R. E. Drummond & Co.
,, 804 Lister & Biggs
Litharge—
Germany, 120 pks. Spies Brs & Co.
Lithopone—
Germany, £76 Wilson & Co.
Magnesia—
Holland. 487 A. & M. Zimmerman
Magnesium—
Germany, £50 Argo S. S. Co.
Manganese Ore—
Sydney, 10 t. H. Grey
Manure—
Germany, 50 t. L. & I. D. Jt. Co.
,, 50 Hollinghurst & Co.
E. Indies, 542 A Hunter & Co.
Methyl Alcohol—
Germany, 20 dms. W. Iszard
Minium—
Belgium, 10 pks. Union Ltge. Co., Ld.
Molasses—
U. States, 500 cks. 2,847 c. J. W. Cook & Co., Ld
,, 100 730 Deering & Robottom
,, 100 634 Bellingham, Smith, & Co.
,, 100 544 Johnson's Saccharum & Co.
,, 100 600 c. L. & T. Ltge. C. & D. Co.
Holland, 600 2,400 J. R. Francis & Co.
Ochre—
Belgium, 90 pks. J. Harrison
France, 150 W. Harrison & Co.
Holland, 15 Robinson, Roberts, & Co.
,, 116 Phillipps & Graves
Spain, 150 J. L. Lyon & Co.
Paraffin Scale—
U. States, 500 cs. Anglo-American Oil Co.
Paraffin Wax—
U. States, 131 brls. Lon. & Til. Ltge. C. & D. Co.
Germany, 7 cs. Butler's Wf., Ld.
Phosphates—
Belgium, 25 t. B. Jacob & Sons
Algeria, 1,200 A. Hunter & Co.
Germany, 11 Anglo-Contl. Guano Works
Potash—
U. States, 29 brls. Charles & Fox
Potassium Carbonate—
Germany, 11 c. R. W. Greeff & Co.
,, 5 t. Petri Brs.
Potassium Chlorate—
Germany, £1,310 Drolenvaux & Bremner
Potassium Oxymuriate—
Sweden, 100 kgs. G. Boor & Co.
Potassium Phosphates—
Germany, 2 cks. Butler's Wf., Ld.
Potassium Prussiate—
Holland, 20 cks J. Owen
Potassium Muriate—
Germany, 711 bgs. Bessler, Waechter & Co.
,, 500 F. W. Berk & Co., Ld.
Potassium Sulphate—
Germany, 350 bgs. Bessler, Waechter, & Co.
,, 117 J. Owen
Pyrites—
Spain, 200 t. Anderson, Anderson, & Co.
Red Lead—
Germany, 5 pks. H. Lambert
,, 127 Fuerst Brs.
Saltpetre—
Germany, 64 cks. J. Hall & Son, Ld.
,, 300 bgs Anglo-Contl. Guano Works
Salicylic Acid—
Germany, 3 pks. Butler's Wf., Ld.
Soda—
Germany, 10 cks H. Lambert
Belgium, 15 c. T. Ronaldson & Co.
Sodium Carbonate—
Holland, 20 cks. Phillipps & Graves
Sodium Hypochlorite—
Holland, 200 c. R. W. Greeff & Co.
Germany, 150 cs. H. Lambert
Starch—
Holland, 1 236 pks. Little & Johnston
,, 80 A. G. Robinson & Co.
,, 75 Phillipps & Graves
Belgium, 112 Leach & Co.
,, 48 T. H. Lee
,, 425 E. & T. Pink
,, 420 T. Ronaldson & Co.
,, 80 C. Tennant, Sons, & Co.
U. States, 4,000 Union Ltge. Co., Ld.
,, 5,400 R. G. Hall & Co.
Stearine—
Holland, 101 brls J. Owen
France, 120 bgs. H. Hill & Sons
,, 100 G. Boor & Co
Tallow—
U. States, 146 brls. W. Balchin, Ld.
,, 30 G. Islay
,, 60 trcs. Hoare, Wilson, & Co.
Sydney, 195 cks. ,,
,, 19 Culverwell, Brooks, & Co.
,, 114 Coml. Bkg. Co.
,, 10 H. Devitt & Co.
,, 80 C. S. Yuill & Co., Ld.
,, 176 Goad, Rigg. & Co.
,, 36 Deering & Robottom
,, 100 Lucas & Spencer's Wf., Ld.
,, 445 Anning & Cobb
,, 76 Beresford & Co.
,, 632 Phillipps & Graves
N Zealand, 129 J. Graves
,, 12 J. Greig
,, 20 A. Brooksbank & Sons
,, 260 Mordaunt Brs.
,, 80 H. Hill & Sons

N. Zealand, 68 Deering & Robottom
" 15 Brown & Elmslie
" 140 J. W. Cook & Co., Ld.
" 1,288 Phillipps & Graves
" 132 N. M. & A. Co.
Germany, 74 trcs. C. S. Lovell
" 8 brls. Anning & Cobb
" 12 pks. 90 c. J. Knill & Co.
E. Indies, 41 cks. Culverwell, Brooks, & Co.

Tar—
Russia, 128 brls. Linck, Moeller, & Co.

Tartaric Acid—
France, 30 pks. F. C. Devon & Co.
" 8 B. & F. Wf. Co., Ld.
Holland, 4 "
" 11 Kirkpatrick, Barr, & Co.
Belgium, 10 B. & F. Wf. Co., Ld.
Italy, 17 Fellows, Morton, & Co.

Ultramarine—
Germany, 54 pks. Steinhoff, Sons, & Co.
" 54 J. Kitchin, Ld.
Holland, 12 J. Barber & Co.
" 2 H. Johnson & Sons
" 12 W. Harrison & Co.
" 4 Haeffner, Hilpert, & Co.

Varnish—
Germany, 6 pks. Brit. Anti-Fouling C. & P. Co.

Waste Salt—
Germany, 24 t. Deering & Robottom

White Lead—
Holland, 20 pks A. & M. Zimmermann
" 45 Taylor Brs.
" 50 Randall Brs.
" 39 W. Balchin, Ld.
" 20 Perkins & Homer
" 50 T. & W. Farmiloe, Ld.
" 48 D. Storer & Sons
Belgium, 56 T. & W. Farmiloe, Ld.
Germany, 21 N. J. Fenner & Co.
" 27 W. A. Rose & Co.

Wood Pulp—
Canada, 2,400 pks. Furness, Withy, & Co.
Sweden, 800 Alsing & Co., Ld.
" 80 John-en & Jorgensen
" 64 Henderson, Craig, & Co.
" 100 H. Johnson & Sons
U. States, 222 Henderson, Craig, & Co.
Holland, 9 H. Lambert
" 250 Robinson, Roberts, & Co.
Norway, 160 G. Hagborg & Co.
" 3,135 London Paper Mills Co.
" 160 Becker & Co.
Belgium, 2,191 J. Harrison

Zinc Oxide—
Holland, 40 pks. M. Ashby, Ld.
" 1 Phillipps & Graves
Germany, 500 Soundy & Sons
" 120 Spies Brs. & Co.
" 9 Butler's Wf., Ld.
" 50 M. Ashby, Ld.
U. States, 325 "

LIVERPOOL.

Week ending February 16th.

Acetic Acid—
Rotterdam, 20 bilns.

Barytes—
Bremen, 100 bgs.

Bones—
Alexandria, 605 bgs.

Borax—
Mollendo, 2,875 sks. Rosenstein & Co.
Iquique, 2,472 50 brls.
Antofagasta, 7,800 Pacific Borax Co.

Castor Oil—
Marseilles, 21 cks. Leete, Son & Co.
" 312 13 cs.

Colours—
Hamburg, 4 cks.
Antwerp, 11 cs.
Stettin, 35 Evans, Sons & Co.
Rotterdam, 10

Cottonseed Oil—
New York, 110 brls.
N. Orleans, 3,250

Cream of Tartar—
Bordeaux, 25 cks.

Creosote—
Bordeaux, 4 cks.

Dyestuffs—
Cochineal
Gd Canary, 37 bgs. Roberts Evans & Co.
" 10 Canary Is Trdg. Co.
" 1 K. Kulman & Co.
Cutch
Rangoon, 332 bxs.
Extracts
Havre, 10 cs. Cunard S.S. Co. Ld.
Rouen, 150 cks. Co-op. W'sale Society, Ld.
Fustic
Vera Cruz, 1,625 logs

Dyewood Extract—
New York, 20 bxs. 265 brls.

Farina—
Stettin, 100 bgs.

Glucose—
Baltimore, 260 brls.
New York, 400 T. M. Duche & Sons
" 200
Boston, 50
St. John, 202 "
Vancouver, 100

Glue—
Hamburg, 3 cks.
Antwerp, 3
Rouen, 42 Co.-op. W'sale Society, Ld.
Rotterdam, 100 bgs.
Stettin, 20 Maik & Co.

Gutta Percha—
Singapore, 8 bskts.
Africa, 99 bgs. Royal Niger Co.

Logwood Extract—
New York, 167 cks. W. I. Chem. Wks., Ld.

Manure—
Bombay, 991 bgs. W. & R. Graham & Co.
" 3,283

Mica—
New York, 10 brls. House & Co., Ld.

Mica (Pulp)—
New York, 10 brls. Addressed

Molasses—
Alexandria, 653 brls.
N. Orleans, 400

Myrabolams—
Bombay, 1,534 bgs.
" 2,895 D. Sassoon & Co.
" 1 D. Balchrider

Ochre—
Marseilles, 20 brls.

Paint—
Boston, 25 cs. A. W. Sutton & Co.

Paraffin Scale—
New York, 1,148 brls. Anglo-Am. Oil Co.

Paraffin Wax—
Philadelphia, 668 brls. Anglo-Am. Oil Co.
" 100

Phosphates—
Pensacola, 362 t. Goldstuck Hainze

Pitch—
Hamburg, 3 cks.

Potash—
Rouen, 129 cks. Co-op W'sale Society Ld.
Portland, 20 brls. Makin & Bancroft

Pyrites—
Huelva, 2,145 t. Matheson & Co.

Red Lead—
Rotterdam, 21 cks.

Resin—
Baltimore, 1,000 brls.

Saltpetre—
Hamburg, 50 kgs.

Soap—
N'port News, 100 brls.
Marseilles, 5 cs. G. G. McKay & Co.
" 20 17
N. Orleans, 854

Soapstone—
Bordeaux, 200 bgs.

Sodium Silicate—
Philadelphia, 1 brl.

Starch—
Hamburg, 240 cs.
Antwerp, 170
" 652 J. T. Fletcher & Co.
N'port News, 800 bgs.
Baltimore, 1,300
Boston, 800
Rotterdam 50 cs. Browne, Geveke & Co.

Stearine—
Antwerp 282 bgs.
" 1 ck. J. T. Fletcher & Co.

Tallow—
New York 600 tcs. 250 hhds.
Newport News, 500
New York, 17 brls J. W. de Silva
Portland, 305
Boston, 50 300 tcs.
Pensacola, 204
N. Orleans, 60

Tannin Extract—
Marseilles, 50 cks.

Tartar—
Bordeaux, 6 cks.

Tartaric Acid—
Marseilles, 10 cks.

Ultramarine—
Hamburg, 1 cs.
Bremen, 11 cks.
Rotterdam, 24

Varnish—
New York, 7 brls. W. A. Warren

White Lead
Rotterdam 88 cks.

Wood Pulp—
Rotterdam, 312 bls.
St. John 2,780 A. Rice & Co.

Zinc Oxide—
Antwerp, 70 brls.

Zinc White—
Rotterdam, 50 cks.

MANCHESTER.

Week ending February 18th.

Acetate of Lime—
New York, 980 bgs.

Alizarine—
Rotterdam, 123 cks. 1 cs. 1 bx. 48 brls.

Barium Chloride—
Antwerp, 50 bgs.

Barytes—
Antwerp, 150 bgs.
Rotterdam, 2 cks.

Calcium Carbide—
Gothenburg, 22 dms. Felber, Jucker, & Co

Chrome Acetate—
Rotterdam, 10 cks.

Colours—
Antwerp, 11 cs.
Rotterdam, 90 cks. 60 154 brls. 60 kgs.

Cream of Tartar—
Rotterdam, 20 kgs

Dyestuffs—
Extracts
Antwerp, 1 brl.
Indigo
Rotterdam, 5 chts.
Logwood
Belize, 392 t. W. H. Stott & Co.

Dyewood Extract—
New York, 40 brls.

Farina—
Hamburg, 55 bgs.
Rotterdam, 100
Stettin, 1,000 Browne, Geveke, & Co.
" 1,525

Glucose—
Rotterdam, 4 cks.
Stettin, 200 bgs.

Glue—
Antwerp, 90 bls.
Hamburg, 8 cs.
Rotterdam, 160 bgs. 7

Lithopone—
Rotterdam, 28 cks.

Methyl Alcohol—
Antwerp, 6 dms.

Paraffin Scale—
New York, 1,282 brls.

Potash—
Rotterdam, 32 cks.

Red Lead—
Rotterdam, 17 cks.

Soap—
N. Orleans, 677 brls.
Rotterdam, 3 cs.

Soapstone—
Cette, 600 bgs.

Soda—
Rotterdam, 20 cks.

Sodium Nitrate—
Rotterdam, 38 cks.

Starch—
Antwerp, 10 bgs. 380 cs.
Boston, 400
Hamburg, 282
Rotterdam, 376

Stearine—
Antwerp, 18 bgs.

Tannic Acid—
Hamburg, 9 cks.

Tartaric Acid—
Rotterdam, 4 cks.

Tin Chloride—
Antwerp, 17 cks.

Ultramarine—
Hamburg, 1 cs.

Wood Pulp—
Boston, 483 bls.
Drammen, 5,791 Felber, Jucker
239 pks.
Gothenburg, 1,256 bls. "
" 6 529
Sarpsborg, 3,074

Zinc Oxide—
New York, 100 brls.

Zinc Sulphate—
Gothenburg, 20 bgs.

Zinc White—
Rotterdam, 70 cks.

HULL.

Week ending February 18th.

Alizarine—
Rotterdam, 98 pks. 2 bxs. 67 brls. Hull & Netherlands S. S. Co.

Antimony—
Hamburg, 3 cs. Wilson, Sons, & Co., Ld.

Barytes—
Antwerp, 19 cks. Gibson Brs.
" 70 H. F. Pudsey
Bremen, 10 Veltmann & Co.
" 41 G. Holmes & Co.
" 1

Caustic Potash—
Bremen, 7 dms. Veltmann & Co.

Chemicals *(otherwise undescribed)*
Hamburg, 2 cks.
" 2 cs. Wilson, Sons, & Co., Ld.
Rotterdam, 1 Hull & Netherlands S. S. Co.

Colours—
Amsterdam, 2 cks. Hull & Netherlands S. S. Co.
Antwerp, 15 pks. Wilson, Sons, & Co., Ld.
Bremen, 1 cs. J. Pyefinch & Co.
Ghent, 25 cks. Wilson, Sons, & Co., Ld.
Hamburg, 6 cs.
Rotterdam, 6 100 brls. 18 cks. 11 bxs. Hull & Netherlands S. S. Co.

Copperas—
Bremen, 4 cks.

Dyestuffs—
Extracts
Bordeaux, 115 cks.
Ghent, 10
Hamburg, 50
Rouen, 9 Wilson, Sons, & Co., Ld.
Logwood
Hamburg, 10 bls. Wilson, Sons, & Co., Ld.

Farina—
Hamburg, 300 bgs. Bailey & Leetham, Ld.
" 100 Wilson, Sons, & Co., Ld.
Stettin, 220 "

Glucose—
Stettin, 10 cks. Wilson, Sons, & Co., Ld.

Glue—
Hamburg, 24 bls.
" 60 bgs.
Rotterdam, 1 cs. Hull & Netherlands S. S. Co.
Rouen, 25 bls. Wilson, Sons. & Co., Ld.
" 4 cks.

Glue Stock—
Dunkirk, 43 bls.
Rouen, 36 Wilson, Sons, & Co., Ld.

Lead Acetate—
Hamburg, 5 cs. Bailey & Leetham, Ld.

Linseed Oil—
Amsterdam, 175 brls. Hull & Netherlands S. S. Co.

Manure—
Bombay, 3,201 bgs.

Myrabolams—
Bombay, 9,205 bgs.

Paint—
Christiania, 3 cs. Wilson, Sons, & Co., Ld.

Phosphates—
Ghent, 162 t. Wilson, Sons, & Co., Ld.

Red Lead—
Amsterdam, 19 cks. Hull & Netherlands S. S. Co.
Rotterdam, 11 "

Rosin—
Brunswick, 2,442 brls.

Saltpetre—
Hamburg, 12 cks. Bailey & Leetham, Ld.

Soda—
Ghent, 200 bgs. Wilson, Sons & Co., Ld.

Starch—
Amsterdam, 280 cs. Hull & Netherlands S. S. Co
Antwerp, 80 Bailey & Leetham, Ld.
Bremen, 2,065 Veltmann & Co.
Ghent, 151 bxs. Wilson, Sons, & Co., Ld,

Tallow—
Boston, 495 brls. Wilson, Sons, & Co., Ld.
Christiania, 42 "
Dunkirk, 228 cks. "

Tartaric Acid—
Rotterdam, 15 cks. Hull & Netherlands S. S. Co.
14 cs.

Ultramarine—
Bremen, 18 cks. J. Pyefinch & Co.
Rotterdam, 1 Hull & Netherlands S. S. Co.

Varnish—
Boston, 1 cs. Wilson, Sons, & Co., Ld.

Waste Salt—
Hamburg, 500 bgs.

White Lead—
Antwerp, 23 cks. Bailey & Le tham, Ld
Amsterdam, 1 Hull & Netherlands S. S. Co.
Rotterdam, 55 "

Wood Pulp—
Christiania, 2,750 bls. Wilson, Sons, & Co., Ld.
Drontheim, 1,190 "
Gothenburg, 502 "
Hango, 437 J. Good & Sons
" 1 cs. "
" 25 W. Shiptone & Co.
" 40

Zinc Oxide—
Amsterdam, 1 ck. Hull & Netherlands S. S. Co

Zinc White—
Amsterdam, 55 cks. Hull & Netherlands S. S. Co.

GLASGOW.

Week ending February 23rd.

Acetic Acid—
Rotterdam, 10 crbys. J. Rankine & Son

Acetone—
Fiume, 19 dms.

Alizarine—
Rotterdam, 1 bx. J. Rankine
27 brls. & Son

Aniline—
Rotterdam, 1 brl. J. Rankine & Son

Aniline Colours—
Amsterdam. 1 ck.

Aniline Salt—
Rotterdam, 4 cks. J. Rankine & Son

Barytes—
Rotterdam, 78 pks. J. Rankine & Son

Barytes Sulphate—
Antwerp, 100 bgs.

Chrome Fluoride—
Rotterdam 5 cs. J. Rankine & Son

Colours—
Rotterdam, 8 cks. J. Rankine
3 cs. 86 pks. & Son

Dyestuffs—
Argols
Bordeaux, 90 cks.
Cutch
Rangoon, 1,300 bxs. P. Henderson
392 cs. & Co.
Extract
Marseilles 50 cks.

French Chalk—
Fiume, 550 bgs.

Glucose—
New York, 50 brls.
Baltimore, 1,200

Glue—
Nantes, 10 cks.
Rotterdam, 60 bgs. J. Rankine & Son

Guano—
Capecross, 950 t. Lawes Chemi. Co.

Lead Acetate—
Hamburg, 20 cks.

Manganese—
Rotterdam, 9 cks. J. Rankine & Son

Manure—
Bombay, 2,133 bgs.

Molasses—
N Orleans, 500 brls.

Oak Extract—
Fiume, 344 brls.

Ochre—
Marseilles, 34 cks.

Oxalic Acid—
Rotterdam, 14 cks. J. Rankine & Son

Painters' Colours—
Antwerp, 4 cks.

Paraffin Scale—
Rangoon, 479 bgs. P. Hendorson
272 cs. & Co.

Phosphate Lime—
Antwerp, 100 bgs.

Pitch—
Marseilles, 24 cks.

Soap—
Rotterdam, 3 cs. J. Rankine & Son
Marseilles, 16 dms.
Fiume, 7
Trieste, 90
N. Orleans, 634 brls.

Sodium Chlorate—
Marseilles, 19 cks.

Sodium Nitrate—
Rotterdam, 4 cks. J. Rankine & Son

Sodium Sulphate—
Rotterdam, 1 brl. J. Rankine & Son

Starch—
Baltimore, 650 bgs.
Fiume, 20

Stearine—
Amsterdam, 62 bgs.

Tallow—
Baltimore, 60 tcs.

Tartar—
Bordeaux, 41 cks.

Tartaric Acid—
Rotterdam, 12 cks. J. Rankine & Son
Hamburg, 4

Ultramarine—
Rotterdam, 2 cks. J. Rankine & Son

Varnish—
Antwer . 1 crt. 1 cs.

Wood Pulp—
Oporto, 1,000 bls.
St. John, 1,496
Gothenburg, 95
Halmstad, 3,000 Christopherson, Andrews & Co.
Christiania, 80

Zinc Oxide—
Rotterdam, 50 cks. J. Rankine & Son
Hamburg, 35

Zinc Sulphate—
Rotterdam, 5 brls. J. Rankine & Son

Zinc White—
Rotterdam, 35 cks. J. Rankine & Son

TYNE.

Week ending February 18th.

Aniline Colours—
Rotterdam, 1 brl.

Antimony—
Hamburg, 100 cs. Tyne S. S. Co.

Barytes—
Antwerp, 350 bgs. Tyne S. S. Co.
Rotterdam, 80 cks. "

Calcium Carbide—
Copenhagen, 1 cs. 2 dms.
Rotterdam, 1 Tyne S. S. Co.

Colours—
Rotterdam, 1 ck. Tyne S. S. Co.

Soap—
Rotterdam, 3 cs. Tyne S. S. Co.

Starch—
Antwerp, 100 cs.

Stearine—
Antwerp, 7 bgs. Tyne S. S. Co.

Tartaric Acid—
Rotterdam, 20 cks. Tyne S. S. Co.

Wood Pulp—
Christiania, 1,284 bls. P. H. Matthiessen & Co.

Zinc Oxide—
Antwerp, 25 brls. Tyne S. S. Co.

Zinc Sulphate—
Gothenburg, 50 bgs.

GOOLE.

Week ending February 15th.

Alizarine—
Rotterdam, 58 cks. 4 cs.

Alkali—
Calais, 6 cks.

Aniline—
Rotterdam, 483 cks. 92 cs

Barytes—
Antwerp, 250 bgs. 21 cks.
Rotterdam, 22

Colours—
Hamburg, 4 cks. 2 cs.

Dyestuffs *(otherwise undes.)*—
Amsterdam, 7 cks. 1 cs.
Antwerp, 2
Boulogne, 1 2 49 pks.

Dyestuffs—
Logwood
Belize, 399 t.
St. Mare, 480

Glue—
Rotterdam, 20 bgs.

Ochre—
Calais, 38 cks.

Phosphates—
Calais, 1,530 bgs.

Potash—
Antwerp, 20 dms.
Hamburg, 5 cks.

Potassium Carbonate—
Hamburg, 4 cks.

Potassium Sulphate—
Dunkirk, 16 dms.

Pyrites—
Huelva, 1,196 t.

Quebracho Extract—
Antwerp, 28 cks.

Salt—
Hamburg, 8 cs.

Saltpetre—
Antwerp, 170 bgs.
Hamburg, 107 cks.
Rotterdam, 200 bgs.

Tartar—
Rotterdam, 2 cks.

Waste Salt—
Hamburg, 100 t.

GRIMSBY.

Week ending February 18th.

Barytes—
Antwerp, 40 bgs.
Rotterdam, 100

Caoutchouc—
Antwerp, 1 cs 5 pks
Rotterdam, 2

Chemicals *(otherwise undescribed)*
Antwerp, 1 ck.
Hamburg, 14 3 cs.

Colours—
Antwerp, 20 cks. 2 cs. 118 pks.
Hamburg, 68 67
Rotterdam, 15

Dyestuffs—
Extracts
Antwerp, 79 cks.

Glue—
Antwerp, 10 bs.

Soap—
Rotterdam, 160 bxs.

EXPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending February 22nd.

Acids—

Durban,	10 cs.	£20
New York,	50	85
Madras,	6	11
Hong Kong,	32	27
Cape Town,	15	18

Alkali—

Melbourne	9	£8
New York,	81 t. 6	130

Ammonia—

B. Ayres,	10 cs.	£14
Bombay,	11	50
Montreal,	6 cks.	10
Pt. Elizabeth,	12	18
Delagoa Bay,	5	14
Melbourne,	30	41

Ammonium Carbonate—

Cologne,	1 t. 2 c.	£26
Calcutta,	10	16
Danzig,	2 10	65
Hamburg,	10 cks.	26
Bombay,	12 cs.	47

Ammonium Muriate—

Christiania,	2 t. 13 c.	£60
Cologne,	19 cks.	98

Ammonium Nitrate—

New York,	10 cks.	£48

Ammonium Sulphate—

Honolulu,	735 t. 11 c.	£7,430
Valencia,	100	1,100
Bremen,	30	308
Dunkirk,	10 4	100
Martinique,	15	160

Arsenic—

Wanganui,	97 dms.	£94

Boracic Acid—

Calcutta,	10 c.	£14
Hankow,	10	15

Borax—
Rotterdam, 25 cks. £38
E. London, 1 t. 69
Rangoon, 16 c. 13
Carbonic Acid Gas—
Hamburg, 12 flasks £60
Channel Is., 30 tubes 70
Havre, 50 250
Caustic Soda—
Pt. Darwin, 6 t. 6 c. £47
Wellington, 17 40
Durban, 7 6
Chemicals *(otherwise undescribed)*
E. London, 4 cs. £23
Bombay, 9 88
Demerara, 80 cys. 25 28
New York, 5 cks. 50 brls. 210
Cologne, 5 65
Boulogne, 1 15
Madras, 2 cs. 52
Rotterdam, 10 5 kgs. 50
Rosario, 11 27
Calcutta, 6 21 144
Auckland, 70 pks. 27
Sydney, 9 15 159
Pt. Elizabeth, 8 34 60
Durban, 2 11
Cape Town, 9 17
Colombo, 4 15
Genoa, 60 kgs. 342
Brussels, 12 83
Dusseldorf, 53 123
Hamburg, 25 1 34 dms. 304
Citric Acid—
Karachi, 2 cs. £12
Amsterdam, 1 ck. 37
Odessa, 3 kgs. 21
Pt. Elizabeth, 1 c. 7
Singapore, 1 7
Yokohama, 9 52
Coal Products *(otherwise undes.)*—
Rotterdam, 24 cks. £743
Mannheim, 12 124
Coal Products—
Aniline
Calcutta, 1 cs. £20
Aniline Oil
Genoa, 10 dms. £320
Rotterdam, 4 1 0
Carbolic Acid
New York, 30 cks. £77
Bombay, 2 cs 205 dms. 80
Philadelphia, 2 11
Calcutta 2 5
Coal Tar Dyes
Boulogne, 8 cks. 1 cs. £71
Boston, 1 19
Wellington, 19 pks. 450
Creosote
Philadelphia, 50 cks. £97
Naphtha
Adelaide, 50 dms. £28
Naphthaline
Newport News, 98 cks. £96
Philadelphia, 312 bgs. 43
New York, 64 81
Pitch
Dunkirk, 715 t. £895
Antwerp, 1,576 2,198
Halifax, 185 cks. 90
Tar
Adelaide, 24 brls. £22
Durban, 200 dms. 10
Hamburg, 250 112
Honolulu, 120 rnlts. 95
Pt. Elizabeth, 2,0 13
Sydney, 20 19
Copper Sulphate—
Treport, 21 t. 19 c. £403
Leghorn, 10 210
Naples, 6 5 151
Marseilles, 27 10 650
Paris, 25 602
Bordeaux, 30 604
Genoa, 92 10 1,460
Cream of Tartar—
Pt. Elizabeth, 4 c. £19
Christchurch, 3 11
Adelaide, 5 19
Melbourne, 1 t. 75
Sydney, 1 75
Disinfectants—
Hamburg, 30 cks. £100
Bombay, { 8 cs. 45 pks. 305 dms. 108
Calcutta, 20 23
Berbice, 2 12
Zanzibar, 8 15
Paris, 12 15
Cape Town, 14 35
Auckland, 10 26
Durban, { 80 225 131 pks. 195
Sydney, 40 kgs. 22 78
Glycerine—
New York, 19 t. £550
Manure—
Pt. Elizabeth, 1 t. 12 c. £80
Bluff, 51 150
Jersey, 10 70
Launceston, 1,000 bgs 435
Martinique, 40 265
B. Ayres, 14 14
Madeira, 2 20
Singapore, 5 28
Canaria, 4 20
Nitric Acid—
Townsville, 15 cs. £13
Oxalic Acid—
Rotterdam, 2 cks. £20
Bombay, 8 kgs. 16
Potassium Bicarbonate—
Philadelphia, 2 t. 7 c. £62
Potassium Bichromate—
Calcutta, 1 t. £33
Potassium Cyanide—
Trinidad, 1 t. 5 c. £137
Fremantle, 1 50 cs. 633
Auckland, 3 336
Pt. Darwin, 2 9 199
Durban, 20 215
Townsville, 1 120
Delagoa Bay, 10 50 1,484
New York, 2 103
Hong Kong, 3 12
Sydney, 2 4 246
Melbourne, 3 319
Calcutta, 4 21
Potassium Prussiate—
New York, 20 cks. £331
Salammoniac—
Bushire, 8 brls. £38
Bagdad, 30 96
Saltpetre—
Melbourne, 2 t. £40
Sydney, 2 46
Santos, 8 18 c. 190
Lisbon, 5 10 113
Madeira, 10 12
Hamburg, 19 18 417
Sheep Dip—
Pt. Elizabeth, 504 cs. £638
M. Video, 200 450
Durban, 1,000 dms. 197
Cape Town, 4 c. 9
B. Ayres, 36 t. 18 1,225
Soda—
Pt. Elizabeth, 3 t. 7 c. £16
Soda Crystals—
Delagoa Bay, 3 t. 5 c. £7
Pt. Elizabeth, 1 2 5
Sodium Bicarbonate—
Auckland, 4 t. 1 c. £21
Barbadoes. 2 12
Pt. Elizabeth, 10 7
Sodium Carbonate—
Auckland, 51. £28
Sydney, 6 c. 9
Sodium Nitrate—
Grenada, 3 t. 3 c. £25
Sodium Silicate—
Durban, 10 t. 3 c. £45
Sodium Sulphate—
Ghent, 250 t. £375
Sulphur—
Pt Elizabeth, 100 kgs £42
Savanilla, 17 c. 19
Lisbon, 2 t. 19 27
Sulphuric Acid—
Singapore, 50 dms. £54
Superphosphates—
Martinique, 30 t. £80
Tartaric Acid—
Hiogo, 25 kgs. £137
Christchurch, 1 c. 5
Auckland, 5 33
Durban, 1 cs. 10

LIVERPOOL.

Week ending February 22nd.

Alkali—
Buenaventura, 2 c. 3 q. £6
Boston, 14 t. 19 106
Alum—
Carril, 1 t. 2 c. £6
Pernambuco, 1 3 2 q. 6
B Ayres, 5 22
Barcelona, 1 10
Oporto, 2 3 2 10
Galatz, 3 16
Rangoon, 3 15 21
Ammonia—
Constantinople, 7 c. 2 q. £12
Ammonium Carbonate—
Carril, 2 t. 2 c. £59
Antwerp, 10 14
Ammonium Muriate—
Genoa, 10 t. £174
Barcelona, 1 8 c. 25
Marseilles, 10 10
Ammonium Sulphate—
Teneriffe, 9 t. 10 c. £100
Cape Town, 1 19 1 q. 21
Bordeaux, 20 10 208
Las Palmas, 130 4 1,356
Venice, 20 10 2 208
Palermo, 5 4 1 53
New York, 51 11 522
Ponce, 2 3 2 22
Barcelona, 9 18 99
St. Louis, 100 15 1,021
Gd. Canary, 7 10 77
Philadelphia, 100 8 2 1,100
Barytes—
Bombay, 10 t. 10 c. £60
Basic Slag—
Granville, 490 t. £315
Bleaching Powder—
Antwerp, 29 cks.
Bombay, 20 69 cs.
Boston, 1,073
Calcutta, 60
Chicago, 50 bxs.
E. London, 21 dms.
E. St. Louis, 30 30
Genoa, 70
Ghent, 54
Johannesburg, 63
Kalamazoo, 47
Leghorn, 33
Maimisburg, 16
Middleton, 26
Muncie, 68
Naples, 83
New York, 128 25 tcs. 50
Niles, 20
Philadelphia, 186
Rotterdam, 40
San Francisco, 50 cs.
Spring Grove, 78
Wabash, 35
Windsor Mills, 64
Boracic Acid—
Toronto, 2 t. 2 c. 1 q. £55
Berlin, 5 7 133
Borax—
Rotterdam, 17 t. 10 c. £256
Hamburg, 11 5 180
Toronto, 8 16 141
Peterboro, 10 6 1 q. 175
Melbourne, 5 73
Tampico, 1 1 2 18
Calcium Chloride—
Sydney, 10 t. 1 c. £21
Rangoon, 2 1 41
La Rochelle, 2 5
Yokohama, 2 6 5
Vera Cruz, 1 6 3 q. 5
New York, 9 18 23
Carbolic Acid—
Valparaiso, 1 c. £5
Hong Hong, 1 13
St. John, 10 1 q. 24
Rotterdam, 9 19 591
New York, 3 4 21 5
St. Nazaire, 19 13
Carbon Bisulphide—
Savanilla, 14 c. 2 q. £13
Caustic Potash—
New York, 8 t. 18 c. £223
Caustic Soda—
Adelaide, 90 dms.
Alexandria, 115
Amsterdam, 273
Antwerp, 35
Bahia, 485
Barcelona, 513 27 brls. 20 cks.
Bilbao, 30
Bombay, 135
Boston, 100 60
B. Ayres, 300
Calcutta, 106
Callao, 100
Cardenas, 6
Carril, 6
Cincinatti, 50
Chicago, 60 40 bxs.
Constantza, 35
E. St. Louis, 30 5
Fremantle, 70
Galatz, 551
Genoa, 240
Hamburg, 65
Havana, 90
Hiogo, 978
Kobe, 173
La Guayra, 15
Leghorn, 5
Libau, 365
Lisbon, 60
Malaga, 200 12
Maracaibo, 6 cks.
Marseilles, 100
Melbourne, 36
Messina, 25
M. Video, 120
N. Orleans, 100
New York, 170 25 bxs.
Odessa, 115
Oporto, 155
Osaka, 100
Pernambuco, 98
Piræus, 40
Pt Natal, 30
Rangoon, 51
Rotterdam, 40
Rouen, 11
Samarang, 260
San Francisco, 270 40
Savanilla, 50
Sourabaya, 220
St. Stephen, 50
Sydney, 63
Tampico, 2 cs
Townsville, 218
Valencia, 15
Varna, 8
Vera Cruz, 85
Volo, 100
Yokohama, 100
Chemicals *(otherwise undescribed)*
Buenaventura, 15 cs. £28
Singapore, 10 c. 17
Calcutta, 20 t. 9 1 q. 52
Melbourne, 1 11 2 7
B. Ayres, 2 10 13
Hamburg, 8 15
China Clay—
Bombay, 200 cks.
Calcutta, 320
Gothenburg, 450 bgs.
Naples. 40
New York, 100 494
Citric Acid—
Valparaiso, 2 c. £14
Coal Products—
Aniline
Boston, 3 pks.
Aniline Colour
Philadelphia, 3 kgs. 1 ck.
Valleyfield, 6
Aniline Salt
Boston. 29 cs.
Smyrna 23 brls.
Coal Tar
Sierra Leone, 20½ brls.
Creosote
Bordeaux. 199 cks.
Creosote Oil
Bordeaux. 500 cks.
Naphtha
Melbourne, 25 dms.
Pitch
Antwerp, 36 t.
Biloao, 60 brls.
Cette, 754
Galatz, 130
Tar
Galatz, 40 brls.
Ibrail, 60
Tar Salts
Bordeaux, 137 bgs.
Cobalt Oxide—
Antwerp, 3 c. £150
Copperas—
Larnaca, 2 t. 13 c. 2 q. £5
Lisbon, 5 1 3 10
Copper Sulphate—
Trieste, 49 t. 17 c. £21,000
Braila, 2 39
Bordeaux, 302 2 1 q. 5,664
Naples, 25 11 3 502
Vigo, 11 18 228
Bayonne 24 12 539
Nantes, 78 10 1,629
Lisbon, 4 19 1 99
Leghorn, 23 1 442
M. Video, 7 3 3 154
Cette, 99 15 2 2,478
Genoa, 23 11 513
Palermo, 5 3 89
B. Ayres, 4 18 107
Marseilles, 29 17 3 680
Dunedin, 1 5 27
Zante, 1 18 2 41
Piræus, 14 2 17
Valdivia, 1 5 22
Algiers, 23 2 508
Antwerp, 4 19 113
Bari. 15 2 340
La Pallice, 2 43
Venice, 44 19 1 1,050

Disinfectants—
Bombay, 1 t. 2 c. £17
Kainit—
St. John, 2 t. 1 c. 2 q. £31
Magnesia—
Bordeaux. 20 cs.
Pt. Phillip 4
Magnesium Sulphate—
Rio de Janeiro, 200 kgs.
Manure—
Genoa, 29 t. 11 c. £90
Teneriffe, 16 96
Havana, 2 60
Gd. Canary, 65 4 504
Accra, 1 cs. 5
Paint—
Algoa Bay, 22 pks.
Amapala 12 cs.
Antwerp, 8
Bombay, 135 dms.
Barbadoes, 2
Barcelona, 11 cks.
B. Ayres, 30 25
Calcutta, 7
Colombo, 3
Curacao, 45 kgs.
Coquimbo, 40
Genoa, 1 ck.
Gibraltar, 4 cks. 40 pks.
Havana, 31
Havre, 1
Lisbon, 10 dms.
Manaos, 3
Maracaibo, 155 pks.
Matanzas, 4
Newchang, 400 kgs.
Piræus, 4
Ponce, 4 cks.
Porto Plata, 4
Pt. Vila, 1 / 56 kgs.
San Juan. 1:9
Santiago de Cuba, 7 cks.
Sierra Leone, 21 kgs.
St Domingo, 4 cks.
St. John's, 4
Sulina, 13
Tampico, 6
Vera Cruz, 30 kgs. 25
Painters' Colours—
Bilbao, 44 pks.
Buenaventura, 16 cs.
B Ayres, 59 cks. 22
Carupano, 220 kgs. 1 brl.
Coquimbo, 12 brls.
Dantzig, 200 bgs.
Galatz, 554
Hamburg, 100
Havana, 14 1 cs.
Lisbon, 5
M. Video 10 cks. 40
New York, 1 / 4 kgs.
Para, 6
Penang, 4 cks.
Philadelphia, 10
Rotterdam, 4
Santiago de Cuba. 30 kgs.
Valparaiso, 2
Paraffin Wax—
Genoa, 15 bgs.
Para, 10 cs
Tetuan, 4 pks.
Phosphates—
Sydney, 10 t. £2
Phosphorus—
Havana, 3 cs. £33
Hong Kong, 5 55
Oaxala, 1 5
Osaka, 5 41
Picric Acid—
New York, 1 t. 4 c. £65
Potash—
B. Ayres, 8 c. 2 q. £5
M. Video, 13 1 9
St. John's, 3 6
Potassium Bicarbonate—
Barcelona, 5 t. 2 c. 1 q. £166
Marseilles, 1 5 1 38
Vera Cruz, 3 4 100
Potassium Bichromate—
Havana, 9 c. £14
Oporto, 8 10
Potassium Carbonate—
Baltimore, 6 c. £7
Potassium Chlorate—
Carril 3 t. £102
Copenhagen, 3 90
Hamburg, 5 60
Havana c. 11
Hiogo, 18 15 428
Libau, 10 310
New York, 10 00
Reval, 7 10 228
Shanghai, 8 10 280
Sydney, 5 152
Vera Cruz, 2 61
Vigo, 1 33
Potassium Prussiate—
Bombay, 5 c. £17
Pottasium Stannate—
Bombay, 1 t. 1 c. 3 q. £58
Salt—
Abonneima, 100 bgs.
Adelaide, 25 cs.
Antwerp, 100 t.
Appam, 11 10 c.
Axim, 400 bgs.
Banana, 20 t.
Bathurst, 192 bgs.
Buenaventura, 299 t. 17
B. Ayres, 400 pks. / 575 brls.
Calcutta, 2,982 100 cs.
Cameroons, 219
Cape Town, 25
Cape Coast, 56 12 c.
Cape Lahou, 500 bgs.
Cardenas 17 t.
Cienfuegos, 40
Dubreka, 1,348 bgs.
Fredericton, 16 t.
Ghent, 300
Halifax, 200
Havana, 129
Lagos, 37
Landana, 29 10
Lucea, 100 cs.
Manzanillo, 106
Matadi, 8
Melbourne, 21 2,679 sks.
M. Video, 13
Newcastle, 360
N. Orleans, 580 1,500
Newport News, 30
New York, 210
Old Calabar, 170
Para, 114 10 c.
Penobsquis, 16
Philadelphia, 35
Pt. Antonio, 10 cs.
Porto Alegre, 125
Portland. Me., 76 6 c.
Pt. Natal, 210
Rio de Janeiro, 1 1
Quillo, 50
Rotterdam, 150
St. John's, 130
Salt Pond, 25
Santos, 50 cs.
Sierra Leone, 150
Sydney, 50 / 169 15 c
Tientsin, 20
Winnebah, 30
Salt Cake—
Antwerp. 120 t. £156
Baltimore, 50 2 c. 82
Hong Kong, 3 4 9
Philadelphia, 63 2 102
Sheep Dip—
Boca, 40 cs. 260 dms.
B. Ayres, 18 t. 15 c. £514
Calcutta, 300 120
Chicago, 25 cks.
M. Video, 30 cs. 450 / 8 t. 18 c. 1 q. 432
Punta Arenas, 50 cks. 700 dms. 688
Soap—
Accra, 400 bxs
Aden, 100 bdls.
Algoa Bay, 10 cs.
Amboina, 100
Amsterdam, 230
Antwerp, 1,000
Auckland, 50
Barberton, 50
Batavia, 1,910
Bathurst, 100
Bombay, 1,374 40
Bluefields, 200
Bonny, 250
B. Ayres, 67
Cairo, 70
Callao, 15 291
Cameroons, 50
Cape Coast, 400
Cape Town, 4 431
Cette, 41
Christchurch, 400
Colombo, 200 4
Conakry, 50
Constantinople, 5
Curacao, 370
Delagoa Bay, 225
Dunedin, 750
Dominica, 20
E. London, 252
Gibraltar, 100 180 pks.
Greytown, 600
Hong Kong, 3
Kombi, 40
Johannesburg, 500
Las Palmas, 1,164
Lagos, 400
Landana, 20
Loango, 80
Lydenburg, 25
Macassar, 500
Madras, 22 5
Manaos, 1,000
Mauritius, 12 dms.
Menado, 1 500
Mossel Bay, 250
New York, 45 7 cks.
Old Calabar, 1,320
Opobo, 870
Para, 1,350 100 bdls.
Paris, 25
Pt. Natal, 200
Pretoria, 200
Rangoon, 850
Rotterdam, 100
St. John's, 251
Santiago de Cuba, 24
Singapore, 701 4
Sierra Leone, 50
Shanghai, 5,815
Sourabaya, 510
Teneriffe, 818
Toronto, 250
Trinidad, 800
Vladivostock, 600
Wellington, 800
Zanzibar, 250
Soda Ash—
Aalborg, 200 bgs.
Adelaide, 66 cks.
Antwerp, 1,030 17
Barranquilla, 5
Boston, 26 trcs. 107
B. Ayres, 289
Calcutta, 50 kgs. 83
Canea, 30 brls.
Fiume, 100 bgs.
Genoa, 321
Ghent, 851
Hiogo. 319
Hong Kong, 97
Kobe, 197
Leghorn, 260
Newport News, 20
New York, 70 trcs. 182 / 25
Philadelphia, 424 bgs.
Reinsoa, 16
Rio de Janeiro, 50
Rotterdam, 534
Samarang, 50
Singapore, 10
Shanghai, 99
Turin, 100 kgs.
Sourabaya, 76
Sydney, 540
Vera Cruz, 19
Yokohama, 561
Zante, 47
Soda Crystals—
Alexandria, 14 cks.
Almeria, 12 bgs
Bombay, 50 kgs.
Boston, 56 bls.
Chalcis, 15
Colombo, 3
Constantinople, 195
Halifax, 20 175
Malta, 14
Newcastle, 358
New York, 140 140
Panama, 2 cs.
Sodium Bicarbonate—
Adelaide, 40 kgs.
Alicante, 30
Antwerp, 45 4 cks.
Barcelona, 170
Batoum, 40
Bombay, 792 18
B. Ayres, 18
Calcutta, 546
Cape Town, 40
Constantinople, 40
Copenhagen, 12
Danzig, 25 4 brls.
Galatz, 20 bgs. / 128 kgs.
Hamburg, 60
Hiogo, 600
Hong Kong, 500
Leghorn, 30 bgs.
London, 15 kgs.
Malaga. 40
Marseilles, 70
Osaka, 60
Pt. Natal, 30 bgs. / 40 kgs.
Rangoon, 100
Reval, 80
Rio de Janeiro, 20
Rosario, 18
St. John's, 15 bgs. 200 dms.
Shanghai, 500 kgs.
Santiago, 6
Sourabaya, 2 cks.
Sydney, 1,140 55
Valencia, 67 10
Vera Cruz, 20
Yokohama, 550
Sodium Bisulphate—
Point-a-pitre, 10 brls.
Sodium Carbonate—
Boston, 112 brls.
Brisbane, 40 dms.
Sodium Chlorate—
Boston, 100 kgs.
Hiogo, 250
Newfairwater, 50 10 cks.
New York, 300
Philadelphia, 50
Stettin, 100
Vera Cruz, 3 pks.
Sodium Hyposulphate—
Callao, 180 kgs.
Sodium Nitrate—
Rimosa, 8 bgs.
Sodium Silicate—
Bombay, 7 brls.
Oporto, 38 cks.
Sulphur—
Boston, 50 t. 2 c. £214
Halifax, 7 10 32
Gothenburg, 50 2 214
New York, 1 20
Portland, Me., 50 2 214
Sulphuric Acid—
Pernambuco, 10 c. £9
Manaos, 7 5
Superphosphates—
Cullera, 200 t. £458
Genoa, 222 12 c. 454
Gd. Canary, 12 33
Las Palmas, 43 195
Mangalore, 10 24
Nantes, 197 3 q. 1,576
Teneriffe, 26 14 93
Venice, 1,760 3,080
Tartaric Acid—
M. Video, 2 c. £11
Varnish—
Bilbao, 8 cks.
B. Ayres, 4 cs.
Calcutta, 2
Constantinople, 1
Coquimbo, 2
E. London, 4
Genoa, 2 2
Hong Kong, 5
Leghorn, 27 pks.
Melbourne, 5
M. Video, 11
Rio de Janeiro, 3 5 dms.
Rotterdam 3
Venetian Red—
Hamburg, 100 bgs.
New York, 211 brls.
Oporto, 100 cks.
Rotterdam, 130 bgs.
Zinc Chloride—
Bombay, 26 t. 15 c. £393

MANCHESTER.

Week ending February 22nd.

Carbolic Acid—
France, 4 cks. 200 bls.
Halifax, 4
Caustic Soda—
Beyrout, 55 ms.
Jaffa, 50
Chemicals (*otherwise undescribed*)
Alexandretta, 50 brls.
Alexandria, 20
Bamberg, 10 kgs.
Cairo, 40
Dresden, 40
Magog, 1 ck.
Coal Products—
Aniline Colours
Germany, 2 kgs. 1 cs.
Aniline Oil
Germany, 3 tins 1 dm.
Aniline Salts
Belgium, 10 brls.
Germany, 1
Mersyne, 5
Beta Naphthol
Belgium, 4 b

Creosote
Germany, 5 brls.
Naphthol
Germany, 4 cks.
Naphthylamine
Germany, 34 cks.
Paranitraniline
Belgium, 4 kgs.
Pitch
Belgium, 210 t. 2 c.
Marseilles, 864
Sodium Naphthionate
France, 28 bgs.
Germany, 15 cks.
Switzerland, 14
Colours—
Germany, 1 ck.
Copperas—
Alexandria, 220 brls.
Disinfectants—
Bombay, 15 cks.
Glue—
Belgium, 12 cks.
Germany, 20
Holland, 12
Treport, 1
Lead Nitrate—
France, 2 cks.
Linseed Oil—
Bussorah, 90 dms.
Oxalic Acid—
Bushire, 4 cs.
Paint—
Beyrout, 1 brl.
Painters' Colours—
Larnaca, 1 ck. 2 pks.
Paraffin Wax—
Holland 2 cs.
Potassium Bichromate—
Alexandretta, 36 cks.
Bushire, 6 cs.
Salammoniac—
Alexandria, 20 cks.
Salt—
Gothenburg, 200 t.
St. John's, 770
" 75
Soap—
Alexandria, 100 bxs.
Bagdad, 40
Beyrout, 1 cs.
Holland, 90
Malta, 2
Soap Stock—
Magog, 40 brls.
Sodium Arseniate—
Bombay, 3 cks.
Soda Ash—
Gothenburg, 10 cks.
Soda Crystals—
Malta, 2 cks.
Tallow—
Bombay, 11 brls.
Holland 13 cks.
Zinc Chloride—
Holland, 20 cks.

HULL.

Week ending February 18th.

Alkali—
Bergen, 2 cks.
Stettin, 134 bls.
Ammonium Sulphate—
Hamburg, 505 bgs.
Antimony—
New York 30 t.
Bleaching Powder—
Hango, 59 cks.
Stettin, 30
Chemicals *(otherwise undescribed)*
Amsterdam, 43 cks. 5 pks.
Antwerp, 3 cs.
Bergen, 9
Christiania, 14 3 019 slbs.
Copenhagen, 8 100 pks.
Gothenburg, 37 9
Hamburg, 11 296
Hango, 1
New York, 15
Reval, 3
Rotterdam, 21 56
Stettin, 60 bgs. 4
Colours—
Boston, 10 cks.
Cottonseed Oil—
Amsterdam, 19 t. 17 c.
Antwerp, 54 10
Bordeaux, 20
Bremen, 18
Copenhagen, 5 2
Gothenburg, 4
Hamburg, 34 2
Rotterdam, 27 19
Rouen, 7 14
Creosote Salts—
Antwerp, 323 bgs.
Dyestuffs *(otherwise undescribed)*
Bergen, 3 cs.
Christiania, 25 pks.
New York, 10 cks.
Gypsum—
Ghent, 20 cks.
Linseed Oil—
Antwerp, 2 t. 12 c.
Christiania, 20 12
Drontheim, 1 15
Hamburg, 17 4
Rotterdam, 5 1
Manganese—
Bordeaux, 5 cks.
Manure—
Dunkirk, 1,846 bgs.
Naphthaline—
Riga, 288 bgs.
Painters' Colours—
Amsterdam, 7 cks.
Antwerp, 41 2 cs.
Bergen, 116 1
Bremen, 95 15 378 dms.
Copenhagen, 1 1
Dunkirk, 1
Christiania, 5 7
Drontheim, 5
Gothenburg, 1
Ghent, 28 4 pks.
Hamburg, 30 2 4 dms.
Hango, 3
Rotterdam, 12 4 pks.
Rouen, 5
Pitch—
Antwerp, 334 t.
Dunkirk, 210
Starch—
Copenhagen 100 cs.
Tallow—
Hamburg { 100 kgs. / 27 cks.
Tar—
Amsterdam, 13 cks.
Copenhagen, 15
Hamburg, 23
Varnish—
Antwerp, 3 cks.
Bremen, 8 cs.
Christiania, 1
Copenhagen, 1 1
Ghent, 1 dm.
Hamburg, 3
Hango, 2
Rotterdam 6
Rouen, 2

GLASGOW.

Week ending February 23rd.

Aluminium Sulphate—
Dunedin, £25
Ammonium Carbonate—
Bergen, £33
Ammonium Sulphate—
Cette, 203 t. 7 c. 2 q.
France, 151 18 3
Genoa, 81 12 2
Penang, 11 3
Benzine—
Bordeaux, £377 8s.
Bleaching Powder—
Dunedin, 13 c. 2 q.
Philadelphia, £117
Borax—
Rotterdam. 23 cks.
Carbolic Acid—
Hong Kong, £52
Rotterdam, 200
Chemicals *(otherwise undescribed)*
Rotterdam, £550
Chrome Ore—
Rotterdam. £10 10s.
Creosote Oil—
Bordeaux, £4,125
Dyestuffs—
Logwood
Dunedin, £180
Pt. Lyttelton, 33 10s.
Farina—
Philadelphia, £75
Lead Nitrate—
Montreal, £20
Linseed Oil—
E. London, 3 t. 11 c. 1 q.
Hong Kong, 2 4 2
Singapore, 18
Litharge—
Johannesburg, 1 t.
Magnesium Sulphate—
Paris, £26 17s.
Manganese—
Rotterdam, £190
Manure—
Kudat, 5 t.
Paint—
Dunedin, £215
Limon, 43
Valparaiso, 82
Painters' Colours—
Auckland, £365
Cape Town, 20
Canterbury, 84
Dunedin, 400
Hiogo, 78 8s.
Hong Kong, 665
Macassar, 123 10
Napier, 47
Singapore, 231
Yokohama, 36
Paraffin Wax—
Christiania, 2 t. 17 c. 3 q.
Cape Town, £105
Fiume, 170
Italy, 1,110
Rouen, 31
Trieste, 800
Pitch—
Rochefort, £1,061 11s.
Potassium Bicarbonate—
Amsterdam, £138
Bergen, 12
Christiania, 1 t. 3 c. 3 q.
Paris, £557
Potassium Bichromate—
Dunedin, £27
Hiogo, 155
Potassium Cyanide—
Fremantle, £508
Red Lead—
Bombay, £85
Dunedin, 21
St. John's, 27
Salammoniac—
Italy, £94
Salt—
Shanghai, 4 t. 11 c. 2 q.
Sheep Dip—
B. Ayres, £43
Soap—
Dunedin, 2 t. 8 c.
Singapore, 2 10 3 q.
Wellington 5 15
Sodium Bicarbonate—
Paris, 3 t. 6 c. 3 q.
Rouen, 22 3 1
Sodium Silicate—
Dunedin, 3 c. 12 lbs.
Sulphuric Acid—
Amsterdam, 8s.
Superphosphates—
Genoa, 19 t. 14 c.
Varnish—
Shanghai, £40
White and Red Lead—
Wellington, £285
White Lead—
Dunedin, £133
Lille, 20

TYNE.

Week ending February 18th.

Alkali—
Amsterdam, 67 t. 1 c. 3 q.
Antwerp, 8 10 1
Rotterdam. 1 15
Barium Binoxide—
Barcelona, 1 t. 2 q.
Genoa, 14 5 c. 3
Hamburg, 13 1
Bleaching Powder—
Aarhuus, 3 t. 3 c. 2 q.
Amsterdam, 26 19
Antwerp, 24 19
Christiania, 20 1
Drontheim, 10
Hamburg, 5 2
Rotterdam, 11 10 1
Caustic Soda—
Aarhuus, 1 t. 14 c. 3 q.
Amsterdam, 15 3 1
Antwerp, 14 16
Barcelona, 159 17 3
Christiania, 4 17
Copenhagen, 2 18
Odense, 1 9
China Clay—
Antwerp, 5 c. 1 q.
Gypsum—
Copenhagen, 1 t. 1 c. 3 q.
Litharge—
Bergen, 1 t. 9 c. 3 q.
Copenhagen, 10 3
Genoa, 12
Magnesia—
Antwerp, 1 t. 2 c. 3 q.
Barcelona, 5 6 2
Hamburg, 1 19 1
Manganese—
Antwerp, 2 t. 1 c. 2 q.
Paint—
Antwerp, 10 c.
Bergen, 12
Copenhagen, 1 t. 6
Painters' Colours—
Hamburg, 1 ck.
Red Lead—
Amsterdam, 10 t. 10 c. 1 q.
Antwerp, 2 5
Bergen, 1 1 2
Copenhagen, 6 3
Genoa, 1 2 3
Hamburg, 11 4 2
Leghorn, 2 13 2
Rotterdam, 2 4
Salt—
Aarhuus, 1 t. 6 c. 2 q.
Soda—
Amsterdam, 10 t. 1 c. 1 q.
Rotterdam, 10
Soda Ash—
Bergen, 10 t.
Sodium Silicate—
Genoa. 10 t. 2 c. 1 q.
Sodium Sulphate—
Antwerp, 150 t.
Sulphur—
Copenhagen. 7 t.
White Lead—
Copenhagen, 1 t. 2 c.

GOOLE.

Week ending February 15th.

Chemicals *(otherwise undescribed)*
Antwerp, 1 ck.
Rotterdam. 1 cs.
Coal Products *(otherwise undes.)*—
Amsterdam, 50 cks.
Antwerp, 12 1 cs. 1 dm.
Boulogne, 4
Hamburg, 4 bgs.
Rotterdam, 13 cks. 1 1
Dyestuffs *(otherwise undescribed)*
Boulogne, 25 cs.
Ghent, 3
Hamburg, 2 cks.
Rotterdam, 44
Painters' Colours—
Antwerp, 9 cs.
Boulogne, 15 tins
Ghent, 1
Pitch—
Antwerp, 574 t.
Boulogne, 319

GRIMSBY.

Week ending February 18th.

Alkali—
Dieppe, 4 cks.
Caoutchouc—
Malmo, 4 cs.
Chemicals *(otherwise undescribed)*
Antwerp, 1 ck.
Dieppe, 15 cs.
Malmo, 2
Coal Products *(otherwise undes.)*—
Dieppe, 87 cks. 4 cs. 9 pks.
Hamburg, 2 1 2 btls.
Painters' Colours—
Antwerp, 13 cks. 1 cs. 5 pks.
Rotterdam, { 1 2 / 2 kgs.

PRICES CURRENT.

WEDNESDAY, Mar. 1, 1899.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9	&	8/3
,, Glacial .. .. ,,		35/-	
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	9
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	0	11½
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	0
Arsenic, white powdered .. .. nett per ton	16	10	0
Alum, loose lump .. .. ,,	4	5	0
Alumina Sulphate (pure) .. .. ,,	3	15	0
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2¾
,, = 24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	19	0	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	10	6	3
,, ,, (grey) Hull .. .. ,,	10	5	0
Aniline Oil (pure) .. .. per lb.	0	0	4¾
Aniline Salt ,, ... ,,	0	0	4¼
Antimony .. .. per ton	38	10	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	4	10	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	5	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizatine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30% A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	8
,, 50/90 ,, ... ,,	0	0	8
Carbolic Acid (crude 60°) .. .. ,,	0	1	11½
,, (crystallised 40°) .. .. .. per lb.	0	0	6¾
,, (liquid 95/97%) .. .. per gallon	0	1	0
Creosote (ordinary) .. .. ,,	0	0	3
,, (filtered for Lucigen light) .. .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	2	12	6
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	3	0
Solvent Naphtha, 90% at 160° .. .. per gallon	0	1	1
Copper .. .. per ton	71	13	9
,, Sulphate .. .. ,,	23	10	0
,, Oxide (copper scales) .. .. ,,	54	0	0
Glycerine (crude) 80% .. .. ,,	24	0	0
,, (distilled S.G. 1250°) .. .. ,,	48	10	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	2	6
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	15	5	0
,, Litharge Flake (ex ship) .. .. ,,	16	15	0
,, Acetate (white ,,) .. .. ,,	26	0	0
,, ,, (brown ,,) .. .. ,,	18	0	0
,, Carbonate (white lead) pure .. .. .. ,,	18	10	0
,, *Nitrate* .. .. ,,	22	10	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	0	0
,, ,, (grey) (ex ship) .. .. ,,	7	17	6
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton	9	10	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	15	10	0
,, Borate .. .. per cwt.	2	0	0
,, Ore, 70% .. .. per ton	3	10	0
Methylated Spirit, 61° O.P .. .. per gallon	0	2	0
Naphtha (Wood), Solvent .. .. ,,	0	3	0
,, ,, Miscible, 60° O.P. .. .. .. ,,	0	3	10
Oils:—			
Cotton-seed .. .. per ton	16	0	0
Linseed .. .. ,,	19	5	0
Stearine .. .. ,,	26	0	0
Phosphorus (Yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	0	0
,, Chlorate .. .. per lb.	0	0	3½
,, Cyanide, 98 % .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) 90 % .. .. per ton	22	0	0
,, ,, ,, 75/80 % .. ,,	17	15	0
,, Potash Hydrate Liquid 50 % .. .. ,,	10	10	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	2	12	6
,, Prussiate Yellow .. .. per lb.	0	0	7½
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	0
,, Muriate, 80 % ,, ... ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3½
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % .. nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,,	4	5	0
,, ,, (Carb. Soda-ash) 48 % .. ,, ,,	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,,	4	0	0
,, ,, (Soda Crystals) .. .. .. ,, ,,	2	10	0
,, Acetate (ex-ship) .. .. ,,	12	10	0
,, Arseniate, 45 % .. .. ,,	13	0	0
,, Chlorate .. .. per lb.	0	0	3¾
,, Borate (Borax) .. .. nett per ton	16	0	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton (10 ton lots)	7	12	6
,, ,, (74 % Caustic Soda) ,, ,, ,,	7	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,,	7	0	0
,, ,, (60 % Caustic Soda) .. ,, ,,	6	0	0
,, ,, (pure liquor 90° Tw.) .. ,, ,,	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate (cwt. kegs) .. .. ,,	6	15	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25 % .. .. ,,	16	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	8	0
,, Nitrite, 98 % .. .. per ton	26	0	0
,, Phosphate .. .. ,,	10	7	6
,, Prussiate .. .. per lb.	0	0	5½
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	10	0
,, Stannate, 40 % .. .. per cwt.	3	10	0
,, Sulphate (Salt-cake) .. .. per ton	1	10	0
,, ,, (Glauber's Salts .. .. .. ,,	1	10	0
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	4	15	0
Strontium Hydrate, 100 % .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	5¾
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton	7	0	0
,, (Roll Brimstone) .... ,,	6	0	0
,, Brimstone: Best quality .. .. ,,	4	12	6
Superphosphate of Lime (26 %) .. .. ,,	2	10	0
Tallow .. .. ,,	24	0	0
Tin Crystals .. .. per lb.	0	0	7
,, English Ingots .. .. per ton	111	0	0
Zinc (Spelter) .. .. ,,	27	17	6
,, Chloride (solution, 100° Tw.) .. .. .. ,,	7	5	0
,, Sulphate, Crystal .. .. ,,	6	15	0

THE

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LATE ADVERTISEMENTS.

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Exeter March 1, 1899

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RIVER POLLUTION POLEMICS.

THREE different but interesting aspects of the ever-recurrent question of preventing river pollution have been presented this week. In the House of Commons Sir Francis Powell sought to obtain a second reading of his Bill, and in the discussion thereon some straight talk was indulged in. Then we have had Sir H. Roscoe's report to the Mersey and Irwell Joint Committee, and lastly a further effort is reported to be in progress for forming a Joint Board to protect the river Dee from pollution. Accounts of the two last mentioned matters are given elsewhere in this issue, and when read conjointly with the following remarks they will indicate the three separate shades of opinion—we nearly said the three factions—which exist upon this undoubtedly difficult question.

Sir F. Powell wishes to extend the main provisions of the Mersey and Irwell Act of 1892 to the country in general, and so enlarges upon the "great improvement in the existing law" which that Act effected, but it seems to have done little to further purification beyond keeping cinders out of the river, and he said as little about this as possible. Mr. Kenyon, however, did not mean to let this point escape, for in moving the rejection of the Bill he laid great stress on the fact that, with the exception of cinders, the rivers of Lancashire were as bad to-day as they were ten years back. In the meantime the attempts to effect an improvement had cost the county of Lancaster about £2,000,000., and it may be naturally asked—If this is to be the cost of keeping cinders and solid refuse out of the rivers, how much will the stoppage of liquid pollution cost? This is a somewhat bold, and in a sense exaggerated, view to take, but we are bound to confess that Sir H. Roscoe, in his report to his committee, has to admit that "they could not measure the improvement that had taken place in the condition of the rivers," and the administration costs of the Joint Committee alone are not light.

Mr. Cawley, and others who supported Sir F. Powell, spoke in favour of the Bill generally, but their reasons for supporting it were very different to those which actuate the prime movers. From his point of view Lancashire manufacturers had a great grievance in that they were selected out of all the manufacturers of the country, and compelled to spend enormous sums in purifying their sewage. What he wanted was that all parts of the country should be placed upon a level. Consequently he supported the Bill, not because he thought it perfect, but because he thought it might be so altered in Committee as to be made a good Bill. When this had been done he thought the other Acts should be repealed, and Sir F. Powell's measure made the law of the land.

The Bill makes allowance for the difficulty of dealing with storm water, but in addition to this Mr. Cawley wanted it making a "little less drastic."

It will thus be seen that at present there are three distinct parties, whose objects may be summarised thus: In the first place there are the ardent reformers, who wish to enact strict laws, and, having obtained special powers, will not adopt definite standards of purity lest they should let polluters off too easily; at the same time they encourage the formation of fresh bodies similar to themselves, as witness the West Riding Board and the would-be Dee Committee. As the other extreme we have those who will have to pay the piper and are determined to show that the benefits are in no way proportionate to the expense polluters are put to, and the burden imposed upon ratepayers and industries. It must be admitted that so far they are able to make a better show than those who are insisting on expenditure for purification purposes.

For the third party we have the lukewarm type of reformer who advocates the prevention of river pollution so long as the whole country is put to the same inconvenience as himself, and if possible he can manage to relieve himself from the special Act devised to cope with his specially deleterious polluting matters. The principle, if one then all, is not capable of unrestricted application, and if the pressure put upon Lancashire manufacturers be too heavy and handicaps them undeservedly there is no room for any half-hearted support to a Bill such as Sir F. Powell would introduce, the fact is but an additional argument in favour of confining attention to the removal of gross solid pollutions only, because in endeavouring to extend purification powers beyond this limit, one is playing a game which is not worth the candle—rumours of better health, pellucid streams, and saving to manufacturers notwithstanding.

NOTES ON THE FLASH-POINT OF OIL.

THE following explanatory memorandum is issued with the text of Mr. Reckitt's petroleum Bill which has precedence on Wednesday next:—

The object of this Bill is to give legislative effect to the intentions of Parliament as expressed in the Petroleum Act, 1871 That Act placed legislative restrictions on the sale, keeping, and carriage of petroleum with a flash-point under 100 deg. Fahrenheit. The flash-point of petroleum is the lowest temperature at which it begins to give off inflammable vapours. The Act of 1871 prescribed a test, known as the open test, by which the flash-point was to be determined. That test was, subsequent to the date of the 1871 Act, found to be fallacious. Unless it was applied with extreme care and scientific accuracy the open test was found to be incorrect to the extent of approximately 27 deg In other words, if the flash-point of any particular oil was in reality 73 deg. Fahrenheit, the open test, as usually applied, showed its flash-point to be 100 deg. To correct the errors incident to the use of the open test, the close test was devised by Sir Frederick Abel. The close test was made compulsory and the open test was abolished by the Act of 1879. But by that Act the restrictive legislation prescribed by the Act of 1871 with regard to petroleum with a flash-point under 100 deg. Fahrenheit was applied to petroleum with a flash-point under 73 deg. Fahrenheit. All petroleum with a flash-point above 73 deg. Fahrenheit was thus, contrary to the 1871 Act, freed from legislative restrictions. The purpose of this Bill is to substitute the accurate or close test for the inaccurate or open test in the Act of 1871, and to restore the 100 deg. flash-point prescribed by that Act.

Mr Kimber has given notice of a motion for the rejection of the measure.

Mr. R. G. Webster has given notice of an amendment to the second reading of Mr. Reckitt's Petroleum Bill, which has precedence next Wednesday, declaring that it is inexpedient to deal with questions affecting the petroleum trade and industry except in a measure of a comprehensive nature, and that the Bill under consideration does not comply with that requirement.

* * *

Mr. Jesse Collings, M.P., Parliamentary secretary, received a deputation last week from the County Purposes Committee of the Corporation of London on the subject of petroleum. Mr. Collings was accompanied by Mr. R. F. Reynard (private Secretary), Captain N. B Lloyd, Her Majesty's Inspector of Explosives, and Mr. W. P. Byrne.

Mr. H. Homewood Crawford, City Solicitor, said the object of the deputation was to submit to the Government the extreme importance of dealing with the subject of petroleum by legislation, and with the recommendations of the Committee as a whole and not piecemeal. He thought it was clearly proved that the city was peculiarly entitled to have an early amendment of the law by reason of its peculiar position.

* * *

On Tuesday, Mr. Collings received a counter-deputation representing firms in Bristol, the West of England, and South Wales, engaged in the petroleum trade, who wished to urge the undesirability of raising the flash-point of petroleum oil, and to lay their views in regard to legislation on other kindred subjects before the Department. Mr. Jesse Collings was accompanied by Mr. R. F. Reynard (private secretary), Captain Thomson (inspector of explosives), and Mr. W. P. Byrne

* * *

Meantime the *Star* continues its pithy attacks upon the suppressionists. It shows that 250 leading London and Provincial papers have declared against the tactics of the low flash party, and this number includes 96 London dailies and weeklies, and such influential provincial dailies as the *Manchester Guardian* and the *Western Morning News*.

* * *

The Public Control Department of the London County Council during the past three years have been collecting evidence with reference to lamp accidents in the Metropolis arising from the use of oil of a low flash-point. They recognise the impossibility of inspection of the millions of lamps already in use, or guaranteeing that an originally safe lamp may have become unsafe through old age and neglect. The committee will probably ask the Council, at its next meeting, to petition Parliament in favour of raising the flash-point of oil to at least 100 degrees, and to urge the Government to bring in a Bill similar to that which has been introduced by Mr. Reckitt, instead of one to regulate the sale of lamps and the storage of oil. The number of deaths last year was 106 So far this year there have been 34 in nine weeks.

"Sanitas" Preparations.—Addressing the shareholders recently the chairman of the Sanitas Co., Ltd., said:—From time to time in our history the character of our products has been cavilled at to some extent; some medical officers of health, who have been wedded to other older remedies, have abused Sanitas fluid and declared that it was not competent to kill this or that germ. From time to time we have accumulated evidence to the contrary, and during the past year we in particular employed the services of one of the most eminent bacteriologists in London to buy our products as he found them on sale in the shops, and to determine in the most exact manner, not only qualitatively but quantitatively, the value of our fluid, of our oil, and of our emulsion. He experimented upon the germs associated with cholera, anthrax, diphtheria, typhoid, and other diseases. I do not propose to trouble you with the detailed results—they would be too technical—but I will read you his conclusion in his own words:—"In conclusion, I regard the results of my investigation as affording ample evidence that the 'Sanitas' preparations are thoroughly reliable when employed in the strengths and for the purposes specified in the directions issued by the proprietors, while their non-poisonous nature and pleasant character render them applicable in many instances where such substances as carbolic acid or mercuric chloride would be inadmissible or dangerous."

What is Vinegar?—The Bristol magistrates have been called recently to consider the somewhat puzzling question. "When is vinegar not vinegar?" It appears from the evidence tendered in the case under notice that there are two descriptions of vinegar recognised commercially. There is the vinegar of tradition and there is a newer and less well-known product which rejoices in the designation of "wood vinegar." A tradesman having been summoned under the Food and Drugs Act, for selling "wood vinegar" as ordinary vinegar, it behoved the Bristol magistrates to determine whether there was any misapplication of terms. The defence called a qualified analyst, who went into the witness-box and swore that "distilled wood vinegar" was, in his opinion, not only vinegar, but it was a perfectly harmless liquid. The "wood vinegar" is a preparation of 99·38 per cent. of diluted acetic acid and 0·62 colouring matter, and it transpired that several convictions had already been obtained against tradesmen for retailing this preparation. The case against the defendant was dismissed, and the point arises: What is to be done in respect to the tradesmen who have already been fined for the same alleged "offence"? If we are correct in our assumption, compensation would certainly seem to be due to those who have been penalised for what the Bristol Bench holds to be no infraction of the law. In any case, it may be hoped that this is one of the debatable points which Mr Long's new Bill may do something to settle in a definite way.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Apparatus for Manufacture of Farinaceous Gelatinous and such like Preparations. W. H. Percy. 3,824. February 21.

Roasting or Calcining Mineral Substances by Electrical Currents, especially Cements. R. J. W. Jones and H. W. Couzens. 3 836. Feb. 21.

Drying White Lead, etc. S. Pope. 3,874. February 21.

Improvements in the Manufacture of White Lead. S. C. Coles. 3,900. February 22.

Saponaceous Products from Petroleum. C. Weygang. 3,929. February 22.

Obtaining High Temperatures for Producing Calcium Carbide, etc. W. Borchers. 3,940. February 22.

Manufacture of Portland Cement. J. Wetter. 3,961. February 22.

Substitutes for Wood, Ebonite, Vulcanite, etc. F. Lamplough and C. & C. Townsend. 4,048. February 23.

Exposing Liquids to the Action of Air or Gases for Concentrating Solutions and for other Purposes. A. Millar. 4,100. February 24.

Washing or Purifying Smoke. G. Mugna. 4,138. February 24.

Productions of Compounds of Titanium. F. M. Spence, D. D. Spence, and H. Spence. 4,183. February 25.

Burning Cement in Blast Furnaces. P. Runge. 4,252. February 25.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in or Relating to the Manufacture of Salt and Apparatus therefor. T. C. Lowden, 7, South Hill Park, Hampstead. Eng. Pat. 21,637. October 14, 1898.

The salt pan is covered, and the steam, etc., given off during the evaporation is removed by a steam jet or other means and passed into a gas producer to produce ammonia or cyanides The pan is heated by the hot gases from the producer, after which, even, they are too hot to pass to the recovery plant, and are cooled by passing through pipes surrounded with brine, the pipes being constructed to form a cradle which can be oscillated in the brine. On coming from the recovery plant the gases will often be at a temperature of 100°C., and charged with moisture, so that they are utilised in drying the wet salt fished from the pan, the moisture being condensed from the gases during this process. The gases may then be burnt in a suitable furnace, which is described, and used for the evaporation of more brine. There are eleven figures.

Improvements in and Relating to China Clay Kilns. G. M. Henley, Roche, Cornwall. Eng. Pat. 4,708. February 25, 1898.

A combustion chamber is interposed between the furnace and the flues of the kiln, in which the heat of the furnace gases is equalised before passing to the series of flues which heat the bottom of the kiln. There are four figures indicating the general arrangement of the plant.

The Production or Obtainment of Metallic Beryllium from Minerals containing it. L. Liebmann, 1, Borkenheimer Anlage, Frankfurt a/Maine. Eng. Pat. 3,497. February 11, 1898.

Minerals containing beryllium oxide are powdered, mixed with excess of calcium fluoride and enough salt to flux, and the mixture subjected to electrolysis when in the fused state. The silica present is removed by the lime, while the alumina and beryllium oxide are separated by the electric current, the metallic beryllium being deposited at the cathode, and the alumina combining with the calcium silicate which is present to form a readily fusible calc-felspar. Carbon electrodes can be used, but it is advantageous to use metals.

Improvements in Anodes for Electrolytic Operations. H. E. Beach, of the firm of H. and J. Beach, Hampton Works, Great Hampton-row, Birmingham. Eng. Pat. 3,431. February 11, 1898.

The anode consists of a series of tapering bars depending from a horizontal carrier-bar, the whole resembling a fork in appearance. A large area is thus exposed to the action of the electrolyte, while the thin or lower ends of the prongs, being in the place of greatest activity, are eaten away before the upper or thicker portions, so that there is no danger of any part becoming eaten through and falling to the bottom of the vat.

Improvements in or Relating to the Treatment of White Lead. T. C. Sanderson, Brooklyn, Humber-road, Westcombe Park, London. Eng. Pat. 11,522. May 20, 1898.

The object is to avoid the drying of the white lead before grinding in oil. The precipitated lead is run with the acetate mother liquor into a centrifugal. The pulp of white lead which is separated is agitated with oil until the lead and oil form into a mass, leaving any residual mother liquor separated. This is run off, and by washing with a little water the whole of the mother liquor is removed. About 50 gallons of water will be enough for a ton of white lead pulp, as opposed to about 1,000 gallons required by the old-fashioned method. The last traces of moisture are removed from the pulp by expression or other suitable means, any excess of oil being likewise removed in this way.

Process for the Manufacture of Metallic Carbides. C. Diesler and F Dieckmann, both of Coblentz a/Rbine, Germany. Eng. Pat. 4,861. February 28, 1898.

Metallic carbonates are pulverised, mixed with ground coal, and compressed into cubes, using pitch or tar as an agglutinant. These cubes are heated in retorts lined with graphite and provided with two openings. One of these is at the top and connects with an exhauster. The other is at the bottom and connects with a tank containing hot carbon monoxide and dioxide. The retort is exhausted and heated. When the temperature reaches 900° C. the exhauster is operated again and removes the disengaged gas. The retort is then filled with hot carbon monoxide, etc., from the bottom tank. These gases are exhausted after a few hours, and a fresh supply admitted to fill the vacuum, and so on until fusion takes place. The temperature is not allowed to exceed 1,200° C.

BRADFORD DYERS' ASSOCIATION.

THE first general meeting of the Bradford Dyers' Association, Limited, was held at Bradford last week, for the purpose of transacting the ordinary business of the association, and also for the purpose of considering a resolution proposing certain amendments of the articles of association which have been required by the Stock Exchange. Mr. Henry Sutcliffe (the chairman) presided. The Chairman said he did not expect that they would require many observations from him that morning about the association. They would have heard and seen from time to time, whilst the shares were being allotted, what numbers of shares were applied for and how they had been dealt with. There was a total number of shareholders of nearly 11,000. The debenture stock and preference shares were much over-applied for, and the ordinary shares were applied for more than four times over. That meeting had been called merely to pass a special resolution. The reason of this was that the Stock Exchange, before they granted a quotation, asked for these alterations, and the directors were anxious to take the earliest opportunity of getting their articles of association altered in accordance with the request of the Stock Exchange. Mr. H. E. Warner (the solicitor) said the articles to be altered to meet the requirements of the Stock Exchange were quite simple, and the alterations were nothing more than formal. The Chairman then proposed the formal resolution altering the articles Nos. 28, 101, and 122 in accordance with the notice. Mr. Walshaw seconded the resolution, which was then put and carried. The Chairman said, in closing the meeting, that all he could say about the Dyers' Association was that they intended it to be a very great success. They hoped that in after years they would be able to meet together and congratulate each other upon the success of the association. They could not, however, expect such a very great success if there were no trade to come to their works to enable them to produce a little profit for dividend on the shares They would no doubt have seen the American Consul's report in that morning's paper, and they would see what a large decrease there had been in last month's trade with America. Although, of course, this was only a small amount compared with the total trade which the Association had to do, "every mickle makes a muckle," and if the business was not there and the trade was not in the town, the Dyers' Association could not have it to do. No doubt the Dyers' Association would just fluctuate in the same manner as all the other concerns of the kind did, sometimes being in a very happy state, but at other times not in such a prosperous position. The proceedings then terminated.

THE NEW AMERICAN CHEMICAL COMBINE.—At a recent meeting of the newly organised General Chemical Company, in New York, the following officers were elected:—President, William H. Nichols; first vice-president, George W. Kenyon; second vice-president, Frederick Phillips; treasurer, James L. Morgan, junr.; secretary, Charles Robinson Smith; assistant secretary, J. Herbert Baggs; chairman executive committee, Sanford H. Steele. The New York office of the company will be in the suite of offices now occupied by the Nichols Chemical Company.

Reports of Companies.

MESSRS. LEVER BROTHERS, LIMITED.

THE BROOKE COMBINE.

The annual general meeting of Lever Brothers, Limited, was held in London last week. Mr. W. H. Lever presided, and there was a large attendance of shareholders In moving the adoption of the report, the Chairman congratulated the shareholders on the fact that they had had another prosperous year, the increase in business during the period under review far exceeding the increase in any preceeding year. The item in the accounts "freehold works and plant" showed an increase of £123,000. Their business was growing very rapidly, and they had to prepare to meet that growth. They had added 45,000 square feet to their soap buildings, and they had completed eighty-five new houses in the village of Sunlight, and had partly completed eighty-five more. An important department of their business was that of printing and bookbinding. They issued some millions of books every year, and in order to ensure the supply of the best possible printing at the lowest possible price they were obliged to undertake the work themselves. They had expended over £24,000. in putting down a complete bookbinding and printing plant, and during last year they taxed this new plant to its utmost capacity. The directors had decided to construct a central electrical power station. Nearly all the machinery in their works was driven by electricity, which they believed would be the most economical power. Their machinery was scattered over thirty acres, and they had come to the conclusion that a central electrical power station close to where the steam is generated would prove a saving. They had completed their cottonseed oil plant at Port Sunlight, and during the year they had put in a central pumping station, and were now supplying their own water. They found that there was a very plentiful supply of water under their works, and they believed they could get ample for their requirements. They now possessed the largest glycerine plant in the world. During the year they had made some miles of new roads along the village at Port Sunlight, and they had made some important additions to their land in Sydney. They had also completed their oil factory at Vicksburg. He had now to mention the purchase by the directors of the business of Benjamin Brooke and Co., the manufacturers of Brooke's Monkey Brand. That transaction had been carried out since the close of the financial year, and would come in the next balance sheet. The directors believed that the basis upon which they had acquired this business would benefit the shareholders in both companies. The shareholders in Brooke's would receive preference shares in Lever's equal in value to their present holding. There were some shareholders who held ordinary shares altogether apart from the original partners. These amounted to £50,000. They were at present receiving 12½ per cent. dividend, and they would receive preference shares in Lever Brothers to such an amount as would secure them 12½ per cent. The result of this transaction was that the preference shareholders in Lever Brothers had obtained a business which was making £34,000 a year profit. The dividends which they had made themselves responsible for were covered more than three times over so far as the preference shares were concerned. The directors felt that they had acquired a business which was still capable of expansion. Their business was still growing and expanding. The balance standing to the credit of profit and loss account had been appropriated as follows:—Dividend on preference shares at the rate of 5 per cent. per annum, £56,25c.; dividend on ordinary shares at the rate of 15 per cent. per annum, £120,837.; 10s. bonus to customers, £56,240; carried to reserve fund, £30,000.; and balance carried to next account, £28,067.; making a total of £291,395. Since the formation of the Company, five years ago, the profits had nearly doubled. The assets of the Company after deducting all liabilities had increased by over a million, so that the preference shareholders were in a much better position than they were when the business was floated into a company.

Mr. P. J. Winser seconded the adoption of the report. One of the risks of combinations of industrial concerns was a rise in prices to the public, but the combination with Brooke's meant a reduction in the price to the general public.

A shareholder asked if any of the new ordinary shares would be offered to the holders of preference shares.

The Chairman replied that they would be taken up by the existing ordinary shareholders. All the ordinary shares were held by the directors, and he did not want that rule to be departed from.

The report was adopted, and the Chairman was re-elected a director.

A special meeting was subsequently held for the purpose of sanctioning the increased ordinary share capital by £50,000. The Chairman said he gathered from letters which he had received that there was some disappointment amongst the preference shareholders at not *getting some* of these ordinary shares, but he thought the fact that the *ordidary shares were held by the directors* was the mainspring of their successful trading. (Hear, hear.) He should not like to see the state of affairs altered. The £50,000. was necessary to enable them to deal with the acquisition of Brooke's business.

The necessary resolutions were passed.

PRICE'S PATENT CANDLE CO., LTD.

The directors of Price's Patent Candle Company, Limited, report that, although there was no diminution during 1898 in the intensity of the competition which has to be met by the company in every department of its business, the general result of the year's working was satisfactory. The profit for 1898 amounted to £83,560, as compared with £77,531. in 1897 and £83,967. in 1896. Adding to the profit of 1898 the £6,013. brought forward from 1897 (together £89,573.), there remained at the close of 1898, and, after deducting the dividend of 15s. a share, amounting to £28.125. paid in September last, a disposable sum of £61,448. The increased profit for 1898 over that for 1897 is attributable to the exceptionally low prices of raw material, which prevailed throughout the whole year, and increased the demand for the company's goods. Beyond this it is useful to know that the company is benefiting from the economies resulting from the improvements in plant and processes that have been continuously effected during past years. The directors recommend that out of the disposable sum of £61,448. a sum of £12,500. be, as usual, written off for depreciation of fixed properties and plant; that £32,812. be applied in paying, on the 11th instant, a dividend of 17s. 6d. per share, completing the year's dividend to £1. 12s. 6d. per share, being the same in amount as that for 1897; that £10,000. be added to the reserve fund, which will thus be raised to £50,000.; and that £6,136. be carried forward. The company's invested money amounted on December 31, 1898, to £245,157., of which £115 152. represented the aggregate amount of unclaimed dividends, and the savings bank, the general insurance, the pension and the accident funds; £90,004 represented unemployed capital, and the remainder—£40,000.—was the reserve fund.

THE SACCHARINE PATENT ACTION.

In the Chancery Division, last week, before Mr. Justice Byrne, the case of the Saccharine Corporation *v.* The Anglo-Continental Chemical Works, Limited, came on as a motion by plaintiffs, who carry on business in London and Manchester, for an interim injunction restraining the alleged infringement of their saccharine patents.

Mr. Fletcher Moulton, Q.C., for the plaintiffs, said the case was a very peculiar one, inasmuch as a company, practically without capital, had been infringing the plaintiffs' patents for some time, and then suddenly gave in and submitted to an interim injunction, whereupon another company sprang up with about £2,000 capital and took over the goodwill of the bogus company, and also its books and its travellers, whilst the bogus company just at the moment when justice was going to be done died out. This kind of process, said Mr. Moulton, had gone on for a long time.

Mr. Neville, Q.C., for the defendants, said he had listened patiently to his learned friend, and he agreed that it was quite true that the plaintiffs had brought actions against other companies which had not come to anything, but his clients were prepared to fight the plaintiffs' patents and to fight the action, and, further, they were willing to give the plaintiffs all the information they could as to how they got the saccharine for the purpose of enabling the plaintiffs to set up their case. The defendants were buyers of saccharine abroad, and were sellers in this country. The plaintiffs owned patents under which saccharine was manufactured in this country, and they alleged that saccharine could only be made in accordance with their patents, whereas the defendants had evidence that saccharine could be made in other ways. The defendants were prepared to give the names of the sellers from whom they bought, and to meet the plaintiffs fairly and squarely on the issue whether their patents were good, and whether the defendants had infringed them. After some further discussion, his Lordship directed the action to be set down at once for trial and the hearing to be expedited, the defendants undertaking to give the plaintiffs all the information they could within a fortnight, after which the defendants could apply for further and better particulars to be delivered to them by the plaintiffs.

Charge against a Metallurgist.—At the Guildhall Police Court, London, last week, Claude Theodore James Vautin, 43, formerly a metallurgist at 66, Old Broad-street, was remanded charged with obtaining American bearer securities to a large amount from various stockbrokers by alleged false pretences. Accused was further charged with an offence under the Bankruptcy Act in leaving England prior to the presentation of his bankruptcy petition. He was arrested in Florence, where the sum of £3,500. was found on him.

Correspondence.

*** We do not hold ourselves responsible for the opinions expressed by our correspondents.*

TABLES FOR SUPERPHOSPHATE MANUFACTURERS.

(To the Editor of the Chemical Trade Journal.)

SIR,—Your contributor under this heading in the issue of January 28th (page 73, etc.,) omits to state that the use of these tables will give results wanting little as regards "condition," and that on the dry side; but, in these days of low prices, very much wanting in "soluble." This statement is justified by an experience of over a quarter of a century. The "dissolving test" also is of very slight utility, requiring, as it does, verification by actual experiment.

I am, etc.,

H. B. YARDLEY.

(To the Editor of the Chemical Trade Journal.)

SIR,—Absence abroad has prevented me until now from observing the reply of the writer of the article on Superphosphate Tables to my inquiry as to the equations on which he bases his calculations for Tables III. and IV. An error has evidently been made, and the fact that it is supported by half-a-dozen fairly important works and at least one text-book makes it all the more necessary that it should be corrected.

The equation I have given is the only one, as far as I can see, which represents the reaction, and consequently each molecule of oxide of iron or alumina requires three molecules of acid—not one, as is assumed in the tables. The figures given in Tables III. and IV. for the amount of acid required should therefore be multiplied by three.

Yours, etc,

7th March, 1899. MANUFACTURER.

ANSWERS TO CORRESPONDENTS.

W. & Co. (Antwerp).—Most of the names of any importance are to be found in our advertising columns. The address of the firm you ask for is—The Scottish Cyanide Company, Kirkland Works, Leven, Fife, N.B.

M. N.—Thanks for information, but we do not propose to deal further with the matter just at present.

W. K.—So far there have been no replies.

S. P.—They have left, and their present address is unknown to us. Try the Post Office.

EXPORTS OF ALKALI AND BLEACH.

THE following returns, which are taken from the official foreign and colonial statistics of the United Kingdom, give the amount and value of alkali and bleaching materials shipped to the undermentioned countries for the month ending January 31st, 1899, as compared with January, 1898 :—

ALKALI.

Port.	1898.	1899.	1898.	1899.
	Cwts.	Cwts.	£	£
Russia	6,355	4,771	2,056	1,500
Sweden and Norway	8,101	5,072	1,839	1,417
Germany	7,876	423	1,640	152
Holland	9,669	15,035	1,841	3,180
France	6,922	7,121	2,358	2,497
Spain and Canaries	26,799	28,461	9,061	8,918
Italy	18,970	37,821	5,522	9,804
United States	109,537	35,077	21,313	7,836
Australasia	17,014	21,114	5,526	6,099
British North America	6,041	6,679	1,501	1,543
Other countries	119,447	126,385	33,788	34,001
Total	336,731	287,959	86,445	76,947

BLEACHING POWDER, ETC.

Port.	1898.	1899.	1898.	1899.
	Cwts.	Cwts.	£	£
United States	63,059	67,589	17,979	16,372
Other countries	24,904	35,166	8,277	9,809
Total	87,963	102,755	26,256	26,181

Parliamentary Jottings.

THE TRAINING OF SANITARY INSPECTORS.

In the House of Commons last week, in answer to Mr. Hobhouse, Mr. Chaplin said an association had been formed, with the concurrence of the Local Government Board, for holding examinations of persons desirous of obtaining certificates of competency for the office of sanitary inspector or inspector of nuisances. The association had been registered as a company with limited liability. One of the objects of the association was to prescribe such a course of study and technical training as might be calculated to ensure the fitness of persons desirous of qualifying for the offices mentioned.

BRITISH AND FOREIGN PATENT LAWS.

On Tuesday Mr. Cawley asked the President of the Board of Trade whether he was aware that the protection granted in Germany to a supplementary patent (Zusatz) was limited to the remaining term of the original patent, whilst in the United Kingdom it was treated as a new patent, running for the full term, and that a patent originating in Germany and registered in France ceased to exist in Germany and in France simultaneously; and whether, considering that the longer duration of such patents in this country than in Germany and France was so serious a disadvantage to British manufacturers, more particularly to manufacturers of chemicals, who were precluded from using them, often for years, during which their German and French competitors were at liberty to do so without restraint or payment of royalty, the Government would be willing to bring in a Bill during the present session to remedy this inequality, arising, not from natural causes, but from discordant legislation.

Mr. Ritchie: In Germany and France the duration of an ordinary patent is 15 years. For this reason patents taken out in both these countries expire simultaneously. In the United Kingdom the duration of a patent is limited to 14 years. Therefore in the great majority of cases in which patents for the same invention are taken out in the three countries, the patent expires one year earlier in the United Kingdom than in Germany or France, and not later, as might be inferred from the hon. member's question. The existing law, so far from placing manufacturers in this country at a disadvantage in this respect, operates distinctly to their advantage on the whole. In the very exceptional case of patents of addition in Germany, it would depend upon the date of the application for the patent whether the patent would expire earlier in Germany or in the United Kingdom. If the application were made within a year from the date of the application for the original patent, the patent would expire earlier in the United Kingdom than in Germany. If made later the patent would expire later. I am not prepared to introduce legislation this session.

NITRATE STATISTICS.—The Permanent Nitrate Committee's public statistical circular for March states:—"Nitrate of soda: total exports to Europe, February, 1,295,000 quintals; loading for Europe, March 1st, 1,535,000 quintals; imports, Europe, February, 108,600 tons; deliveries, Europe, February, 161,130 tons; visible supply, Europe, March 1st, stocks and afloat, 637,030 tons."

PRESERVING MILK.—A process now being introduced in London for the preservation of milk depends on the use of oxygen and carbonic acid gas. The milk, preferably, of course, as soon as it comes from the cow, is put into self-closing bottles such as are used for aerated waters, and subjected for a fraction of a minute in a special machine to the action of a mixture of the above-named gases at a pressure of several atmospheres. In the first instance the bottles are completely filled but on being removed from the machine they are left with a small space containing gas the pressure of which serves to retain the stoppers in place. This treatment appears to have the effect of making the milk keep fresh for a considerable time, some samples being quite sweet when examined 50 or 60 days after being bottled. Moreover, the contents of the bottles, after they have been opened, seem to remain sweet for a longer time than ordinary untreated milk; thus in one experiment in which portions of new milk and the preserved milk were placed side by side, the former went sour in three days, while the latter lasted nine. The milk does not undergo any visible change. It does not effervesce, and no alteration is apparent in its flavour, though whether any more subtle changes are produced in its character or composition under the influence of the oxygen is a point that does not seem as yet to have been definitely determined. The inventor again considers that the treatment probably destroys all harmful baccili, but that, too, is a proposition which requires proof. Neither oxygen nor carbonic acid is fatal to all forms of bacterial life; the bacillus of typhoid fever, for example, has been found to grow in an atmosphere of the latter as well as in the air, and there are species which will not grow in pure carbonic acid gas, yet flourish in a mixture of the two gases.

MERSEY AND IRWELL JOINT COMMITTEE.

A MEETING of the Committee was held on Monday, in the Board-room, Mosley-street, Manchester. Sir John T. Hibbert presided. A report was presented from the chief inspector, Mr. R. A. Tatton, with regard to the sewage works and schemes of various authorities, including the Bolton Corporation, the Bury Rural District Council, the Bury Corporation, and the Gorton Urban District Council. The Consulting Sub-committee also presented a report, which, amongst several matters, comprised analyses laid before the Sub-Committee by Sir H. Roscoe, of the effluent from the sewage works of Manchester, Salford, and Bolton. These were taken in the months of January and February, and were described as "bad effluents." The Sub-committee recommended that copies of the analyses should be forwarded to each authority. The recommendation was adopted by the meeting.

The Chairman said that Sir Henry Roscoe had besides prepared analyses of 36 samples of sewage effluents from the works of local authorities. Of these 18 were good, eight were fair, six were unsatisfactory, and four were bad effluents. These analyses, taken altogether, proved that some progress had been made in the work of the Committee. The retrospect was then so far satisfactory, and it was well that they should from time to time examine what had been done and institute comparisons, in order that they might be able to judge of the progress made. Sir J. Hibbert pointed out that the accounts of the analyses gave information of the method of treatment employed by the various authorities whose effluents had undergone analysis. They showed that the authorities whose effluents were described as "bad," all treated their sewage by "tanks" alone. The eighteen "good" effluents were from sewage treated in three cases by land, in three cases by tanks and land, in eleven cases by tanks and filters, and in one case by filters.

Sir H. Roscoe, who addressed the Committee on the results of the analyses, said that the work of the Committee so far had undoubtedly gone to prove the truth of what he had stated some years ago, namely, that the chief difficulties the Committee would have to meet would be found in connection with the purification of the sewage of those places in which were great masses of population, and not so greatly with regard to the manufactories and the smaller local authorities. The work carried on by the Committee had been exceptionally useful, and they were now in possession of knowledge, proved by demonstration, which would enable them to proceed further and produce more beneficial results. Many difficulties had been overcome, and it was certain that very considerable progress had been made in purifying the condition of the rivers during the past few years. It was now, in fact, found possible in places to utilise the water for some manufacturing purposes, which could not previously be done. Then it could not be overlooked that the work of the Committee had been carried out without undue interference with trade. No manufacturer had had to leave a district through any difficulties imposed on him by the Committee. He must tell the Committee that he had had prepared the results of a very elaborate series of analyses of the waters of the Ship Canal and of the rivers in the watershed.

A COMPARISON OF THE RIVERS.

These returns were of considerable interest, and would together form a beginning of their real knowledge of the condition of the water in the canal and of the rivers. They had hitherto lacked means of comparison of the condition of the several rivers, which was a not unimportant matter. Sixty-three samples had been taken from the Ship Canal at different times and in different places, and these had been analysed, so that they had now a fair idea of the condition of the water of the canal. It had been said that the composition of the water in the canal was worse in character than the effluent from the works of the local authorities. That, however, was disproved by these analyses. Sixty-nine samples had been taken from the various rivers. It was found that in all cases the condition of the waters deteriorated the further they got from the source of any river. Although they

COULD NOT MEASURE THE IMPROVEMENT

which had taken place in the condition of the rivers during the past few years, there could be no doubt that a real improvement had been made. The samples had been taken from the Mersey, the Irwell, the Irk, the Medlock, and other streams, and they proved that the water of the Irk was by far the worst in condition. An investigation into the cause of this would follow in due course.

The Chairman moved that the results of these investigations by Sir H. Roscoe should be printed and circulated. This resolution was seconded by Mr. Killick.

In the course of a short discussion which followed, Dr. Hewitt asked whether Sir Henry Roscoe was of the opinion that it was more difficult for large than for small towns to deal with the treatment of their sewage. For himself he was inclined to think that if the larger towns rose to a sense of their responsibilities, they could deal with the matter equally with smaller towns.

Sir Henry Roscoe said no doubt the methods available for small towns were also available for the large centres of population, but he should not like to say off-hand that they were equally applicable. As had been said, the larger towns had a great deal at stake, and supposing they hurriedly committed themselves to a scheme, they would be put to great expense if it was found necessary to alter what they had done. He was reminded that in 1895 he advised the Manchester Corporation to undertake the trial of a set of filters, and everything that had since happened showed how well it would have been had this been done on a suitable scale. They would then have obtained practical evidence which would by this time have been of incalculable benefit. Then it must be remembered that in large centres they had to deal with the difficulty of carrying off the storm water, which was very considerable.

The resolution was adopted. Applications from several local authorities were considered, and this ended the business of the meeting.

ALLEGED CHEMICAL WORKS NUISANCE.

AT the Durham Assizes, held last week, the case of Lambert and others *versus* Wilson, came on for hearing before Mr. Justice Ridley and a special jury, the action being a claim for damages to the Coatham Stob Farm at Yarm, alleged to have been caused by the defendant's chemical works at Eaglescliffe.

Mr. Scott Fox, Q.C., and Mr. Yarborough Anderson were counsel for the plaintiffs, and Mr. J. Lawson Walton, Q.C., M.P., and Mr. G. F. Mortimer for the defendant.

For the plaintiff, Mr. A. C. Wilson, public analyst at Stockton, gave evidence that he had examined the water flowing down the Stell and had taken samples from the outfall of the works, and the products were such as would be expected from such a works as was carried on at Eaglescliffe. He also found 1·2 grains of sulphuric acid in the hoar-frost on one square yard of grass land near the works; but he admitted on cross examination by Mr. Walton that sulphuric acid was found in all smoke, and that the smoke of Stockton and Middlesbrough might be blown over by an east wind.

Mr. Walton, for the defence, said, from his point of view, it would be difficult to overstate the importance of the question He quite understood the hostility with which farmers regarded the invasion of an agricultural district by a manufacturing process. Mr. Wilson was not an interloper, however. His chemical manufactory had been there from 1832, from the time of Mr. Wilson's father, and from that time sulphuric acid had been made in that neighbourhood without inflicting serious injury upon Mr. Wilson's neighbours, with one exception.

Mr. Wilson, owner of the Eaglescliffe Chemical Works, described in detail the means taken to prevent the acids and chemical refuse going down the Stell. The escape was not one-eighth of the amount allowed by law, and was in his opinion innocuous. In his opinion the trees and hedges on Coatham Stob Farm had been neglected, and the young shoots eaten by rabbits and cattle. He considered his works could not do any harm to vegetation, nor had he sent anything down the Stell which would give anyone reasonable grounds of complaint.

Mr. Francis Middleton, tenant of two farms adjoining the chemical works, said he and his cattle had not suffered in any way from the fumes from the chemical works. For some time last summer some of his cattle had had no other water but what they obtained from the Stell.

Mr. F. W. K. Stock, public analyst, said he had inspected the Eaglescliffe Chemical Works, and found no waste products from Mr. Wilson's works were thrown into the Stell. The reservoir for the collection of waste acids was efficiently constructed, and there was no overflow. He understood the solid refuse was freed from salts of iron before being thrown away. He had tested the outflow from the drains, and the ratio of dilution of effluent was 1 to 40 at the drinking place. He found in the effluent 5·14 grains of sulphuric acid to the gallon in the first outfall, and 4·45 grains in the second outfall. He did not consider the ratio harmful to animals —Mr. John E. Stead, analyst, was also examined.

Professor Macfadyen, Principal of the Royal College of Veterinary Surgeons, London, considered the cows suffered from parasitic gastritis. Poisoning with sulphuric acid or sulphate of iron would have caused constipation in the cattle rather than the symptoms of purging present in these cases. He believed the lambs also died from parasitic disease of the stomach and intestines. During the autumn of 1896 he investigated, on behalf of the Royal Agricultural Society, scores of cases of lambs dying under similar conditions to those at Coatham Stob Farm, and in almost every case death was due to parasitic disease. He did not consider sulphate of iron in less quantity than half-a-pound dose would injuriously affect an animal. He considered the administration of two ounces of sulphate of iron a day would kill an animal in a month.

A mass of other evidence was produced, thirteen neighbouring farmers denying that they had suffered injury from the chemical works. Mr. John McKenzie (engineer) and Mr. John Pybus (an official at the chemical works) also gave evidence.

His Lordship, in summing up, put the following questions to the jury:—1. Was the water of the stream substantially polluted by the effluent from the defendant's works—that is to say, polluted sufficiently to do damage to the farm and the stock grazing upon it? 2. Were the pastures rendered substantially noxious or the trees killed by the fumes from the defendant's chimney?

The jury answered the first question in the affirmative, and awarded £250. damages in respect of the loss plaintiffs had sustained by the pollution of the water. They answered the second question in the negative.—His Lordship gave judgment accordingly with costs, and granted an injunction against the defendant to restrain the pollution, upon terms to be arranged between the parties.

SOCIETY OF CHEMICAL INDUSTRY.

SCOTTISH SECTION.

A MEETING of this section took place on the evening of Monday, March 6th, at Broxburn, in Linlithgowshire. This was in pursuance of the new habit lately introduced—namely, that of holding meetings in special industrial centres, whenever the subjects booked for treatment happened to hinge wholly or largely on one particular chemical industry. Broxburn was so chosen this time because of the subjects selected for the occasion grouping entirely within the category of the mineral oil, paraffin, and sulphate of ammonia manufacture. Broxburn, on the main Edinburgh and Glasgow highway, and situated about 12 miles from the former city and 33 from the latter, is in the centre of the principal Scottish shale field, and is rightly held as the metropolis of the mineral oil industry, having within it the works of the Broxburn Oil Company and those of other companies in the immediate neighbourhood, while at a short distance away are those of the Linlithgow Oil Company, the Dalmeny Company, etc. The meeting was held in the public hall of Broxburn, Mr. John Young, of the Linlithgow Oil Company, presiding. Mr. N. M. Henderson, of the Broxburn Company, described the chief points of his latest retort (the Henderson retort). The working yields of the various refined products, he said, came to 72·10 per cent. of the crude oil used, the balance, 27·90 per cent, being made up of tar and still coke of a high value as fuel. This introduced a discussion, participated in by most of the experts present, and including Mr. Beilby, the present president of the society. Mr. D. R. Steuart, chemical director of the Broxburn Oil Company, was down on the agenda list for the reading of a paper entitled "Notes on the Oxidation of Mineral Oils from Broxburn Oilworks Laboratory," but the time found at disposal did not permit of this being dealt with as intended. He presented briefly a digest of the paper, in which were particularised the effects of light and air upon burning oils and paraffin spirit, and the injurious action of metal on oil when, for instance, the latter was permitted to remain for any considerable time in metal founts. Mr. Steuart also, in the course of his remarks, raised the separate question of utilising the gases given off during distillation, and also that of the deteriorating effect of sulphur on the oils The attendance was largely representative of the mineral oil industry, and some interested members of the general public were also present. The thanks of the meeting were voted to those members who had chiefly contributed to the business of the sitting, which, by arrangement, was brought to a conclusion in time for intercepting the latest trains to Edinburgh and Glasgow.

MANCHESTER SECTION.

The fifth meeting of the session was held at the rooms of the Chemical Club, Victoria Hotel, on March 3rd, Dr. Watson being in the chair. There was a good attendance. In the half-hour devoted to general matters Mr. Bell brought up the question of preparing a standard solution as a basis for volumetric analysis, and explained how he made hydrochloric acid his starting point. He standardises a pure solution of hydrochloric acid by precipitation with nitrate of silver, and also checks the solution by neutralising with ammonium hydrate, and evaporating, etc. A sort of general discussion ensued, in which Mr. George E. Davis stated his preference for crystallised oxalic acid as a starting point. It was easily obtainable in a high state of purity and kept well. As regards buying a "pure" solution of hydrochloric acid to start with, he had found "pure" oxide of copper, which contained 15 per cent. of calcium sulphate, which when used for the estimation of sulphur had led to some astounding results. Dr. Liebmann also declared in favour of oxalic acid. Dr. Grossmann dilated on the necessity of testing chemicals used for such fundamental purposes, and argued therefrom that the substance which was easiest to test for impurities ought to be adopted as a starting point. In his opinion such a substance was sodium carbonate. With it he could always prepare accurate solutions; in fact the solutions were far more accurate than was necessary, seeing the general inaccuracy of the flasks and burettes used. Mr. Duncan confirmed the latter statement, and said he had found an error of 1 cc. in a half litre flask. Dr. Bailey said that from the experience gained by students at Owens College when calibrating instruments he had found litre flasks even worse, and there was hardly a burette that was accurate. The error was generally covered in 5 cc., so that by titrating from two portions of the burette an error of 1 per cent. was frequently possible. The use of hydrometers was suggested and generally discredited. Mr. Davis thought that by the Westphal balance considerable accuracy could be attained, and Mr. Barnes described a float of great sensitiveness which he had in use, but the consensus of opinion was in favour of direct titration for the final adjustment. Mr. George E. Davis then read a paper on "The diagnosis of a cause of local failure in Chemical Lead." He pointed out that lead was largely used in the chemical industries on account of its apathy to combine with sulphuric acid, but often some very remarkable actions were set up in leaden apparatus, the cause of which was not easy to identify. The slow wear and tear of lead in leaden apparatus was not more than alluded to, the principal portion of the paper being taken up with an account of the strange holes which quickly appear in some leaden sheets. The author showed by diagrams and samples that this was sometimes due to a fibrous or crystalline development of a portion of the sheet, but how it came about he did not attempt to explain. It seemed, however, that these crystalline spots were associated with deposits of oxide, and covered with a skin of pure metal, which hid the deteriorated portion from the eye, so that the defect could not be seen by the purchaser in the ordinary way or detected until the sheet had been cut through at the defective place. The sheets gave way rapidly in use, and it was a difficult matter to fix the responsibility. Generally this failure was only met with in thick sheets or plates. The discussion which ensued was participated in by Messrs Irwin, Grossmann, Craven, Radcliffe, Kleeman, and the chairman. The latter could not understand the crystalline faulty parts being associated with lead oxide. In replying, Mr. Davis confirmed Mr. Craven's remarks concerning lead being suddenly and unaccountably attacked by hot, weak vitriol. He had found that the gas given off was hydrogen. He had not tried the X-rays to detect flaws as suggested by Dr. Grossmann. Dr. Kleeman's analogy in regard to spots in the old-fashioned tinfoil and mercury mirrors was interesting, as the spots had been traced to crystalline formations in the small ingots from which the tinfoil was made. The usual votes of thanks concluded the meeting.

Trade Notes.

The Electrolytic Patents Case.—The hearing of this case has been in course of progress during the past week, and was concluded on Wednesday, when their lordships reserved judgment.

Change of Address.—We learn that the Lautaro Nitrate Company's offices are now at No. 5, Bishopsgate-street Without, E C.

The "Equal Pressure" Friction Clutch.—The Unbreakable Pulley Co., of West Gorton, Manchester, send us a new copyright price list of the above clutch. This clutch was noticed in the *Journal*, No. 564, of March 12th, 1898.

Great Engineering Combination.—It is stated that a powerful trust is being formed for combining the whole of the concerns engaged in one of the largest and best known branches of the British engineering trades. It is expected that the capital will be little short of ten millions sterling.

French Adulteration Law.—Alphonse Karr once perpetrated an ingenious epigram: "I poison the grocer—guillotine; the grocer poisons me—ten francs." But in France, as some recent prosecutions go to show, there is not only ten francs fine, but the compulsion to put up in large print in two places in your shop that you have been convicted and fined for adulteration, and to keep this interesting memento there for many months.

The Resin Market.—There has been very little change in the resin market since the issue of the last report. The tightness in the position of pale resin is making itself felt, and it is difficult to obtain any offers of near shipments from America. The opening of the new season will find most of the United States ports nearly bare of stocks of "pales," and, as the large American soap-makers are also said to be very short of supplies, a prompt and extensive demand for early arrivals of the new crop is predicted. Mediums and low grades maintain their position, and a fair trade is being done in these descriptions. There has been a strong advance in "pales" on the spot in London, stocks being almost exhausted. Shipments reported are, however, expected to make the position more easy when they arrive. In Liverpool, stocks of low grades have accumulated, and the spot market for these descriptions is very much easier in consequence. "Pales" continue firm, and with the American position strong and the probability of a late crop, an upward movement of prices is said to be probable.

The Grove Chemical Co., Ltd.—This firm, which has long been known for the manufacture of glues and gelatines, is about to reconstruct their works in order to meet the growing demands of their business. The *locale* will still be Appley Bridge, near Wigan. While erecting new buildings, the company are, we learn, installing new machinery selected in accordance with the latest improvements in the manufacture of high-class glues.

A New Explosive.—An exhibition of the power of a new explosive, named "Kallenite," was given at Sydney, New South Wales, recently. Kallenite differs from dynamite in that, instead of being largely composed of an incombustible base like infusorial earth, which is employed in the preparation of dynamite, eucalyptus leaves and ti-tree bark are used. These contain a large quantity of gas, and their combustion adds to the force of the explosion. The whole compound, in short, is explosive, and this, it is claimed, adds to its efficiency and economy at the same time.

The Northwich Subsidences.—As a sequel to the last great subsidence of the London main road at Northwich, the Cheshire County Council have engaged Sir Edward Leader Williams, of Manchester Ship Canal fame, as consulting engineer, to decide what steps to take for the future maintenance of the thoroughfare. The road which crosses the treacherous neighbourhood, and, on the occasion of the recent subsidence, was impassable for four days, now rests on a timber framework. A special County Council committee has been appointed, and a pontoon foundation and other schemes are under consideration.

Salt Shipments.—The statistics for the last month of the Cheshire salt trade show a tremendous reduction in shipments on those of the corresponding month of the previous year, the tonnage for the respective months being 34,176 and 43,467, or a decrease of 14,291 tons. There has been an increase of nearly 1,000 tons despatched by the Ship Canal from Runcorn. The South American and East Indies markets are responsible for the vastly reduced freightage. The clearances of salt from the Mersey to Calcutta for the two months ending 28th February were 26,432 tons, and from other ports to Calcutta 2,534 tons. The clearances from Liverpool to other Indian ports amounted to 6,356 tons. The probable clearances during March are, to Calcutta 14,600 tons, to Rangoon 2,000 tons.

The Pollution of the Dee.—The adjourned inquiry by the Local Government Board, respecting the pollution of the river Dee, was resumed at Chester Castle last week, before Dr. Sweeting and General Crozier, the Local Government Board inspectors. It will be remembered that some time ago the board held an inquiry into the application of the Chester City Council, Cheshire County Council, and the Flintshire County Council to constitute a joint committee to enforce the provisions of the Rivers Pollution Prevention Act of 1876. The original scheme as submitted was opposed by the Denbighshire and Merionethshire County Council, together with a number of authorities in the Watershed of the Dee, and eventually the Flintshire County Council joined in the opposition. Mr. T. W. Killick, deputy chairman of the Cheshire County Council, opened the case on their behalf in favour of the application and pointed out the great pollution which was existing in the Dee, especially in the upper reaches, and mentioned that Chester, Holt, and Bangor derived their drinking water supplies from the stream. The object of the conference was to endeavour to bring about an equitable basis of contribution to and representation on the proposed joint board. Mr. Samuel Smith (Town Clerk of Chester), Councillor B. C. Roberts, and Councillor J. Jones (Boughton Ward), were present representing the city. Mr. Reginald Potts (Clerk to the Cheshire County Council), and members of that body also supported the application.

Precautions Against Sewer Fatalities.—By the recent fatalities to workmen while engaged in sewers much interest has been aroused in the question of the dangers this class of workers has to face and the means which should be taken to minimise the risk. In consequence, the Salford Corporation have issued the following regulations: Whenever men have to go down into an old and foul sewer or cesspool they are directed to open the lids of two adjacent manholes so as to provide a downcast and an upcast shaft or if only one manhole is available, and there is no other outlet by an open sewer or vent-pipe, they should place a wooden tube about a foot square down the manhole for use as a downcast shaft. To make the manhole or tube act as a downcast shaft it is directed that a shower of water be poured down it from a rose jet. The men are also instructed to test the air in a manhole before going down, and not to enter until a light will burn brightly in it. If signs of combustible or explosive gas are found skilled men and safety lamps from some colliery are to be obtained, and the direction of the work in hand given to them. When a man has to descend a risky manhole or shaft he must have a strong rope tied properly round his shoulders, and it is directed that a similar precaution be taken when a man has to crawl along a risky sewer, so that he may be drawn back if he becomes over-powered by gas. In any case of special difficulty or danger the borough engineer has to be notified, so that he may take the responsibility of the work. [And why not an oxygen mask for emergencies?—Ed. *C.T.J.*]

Aluminium Electrodes.—The British Aluminium Company are drawing the attention of the electrical trade to the suitability of aluminium for employment as electrical conductors. They state that aluminium strip and wire having an electrical conductivily of 60 to 62 per cent. of that of copper, being three and a third times the weight of aluminium, bulk for bulk, the same conductivity can be obtained with aluminium by increasing the section, while at the same time saving about half the weight as against copper. The company have themselves had aluminium wire and strip in use for electrical transmission at their Foyers Works for some time past, with satisfactory results. For good quantities of strip and wire for electrical work they are prepared to make specially low prices to compete favourably with copper, both as to price and conductivity.

Projected Oil Milling Combination.—The representative of an American syndicate has been visiting Hull for the purpose of inducing local oil milling companies to join a projected gigantic combination in oil and feeding stuffs. It is understood considerable success has attended the efforts of the syndicate in London, Liverpool, and other towns, but it is not yet certain whether Hull firms will join. Some idea of the magnitude of the financial operations involved may be gathered from the fact that there are in Hull alone about 36 oil mills, ranging in estimated value from £5,000. to £40,000. each. When the promoters first launched their idea it was thought to be an impossible task to realise it. The representative of the syndicate is, however, credited with being a very astute business man. Whether there will be created an English monopoly in oils and feeding stuffs for cattle is the question which the syndicate have to settle.

Market Reports.

TAR AND AMMONIA PRODUCTS.

There is nothing fresh to report in regard to benzols, the price remaining as last quoted, with a depressing outlook. With the exception of pitch and creosote most of the other products are becalmed, there being no quotable change in carbolic acids or naphthas. Pitch is quoted 25s. f.o.b. East Coast, and 23s. for West Coast.

Sulphate of ammonia keeps firm, with a satisfactory demand for prompt. The forward market is also beginning to show signs of greater activity, though so far quotations are very variable. Closing prompt values are:—Beckton, £10. 7s. 6d.; London (outside makes), £10. 8s. 9d.; Hull £10. 7s. 6d. to £10. 8s. 9d.; and Leith £10. 8s. 9d. Sodium nitrate steady.

MISCELLANEOUS CHEMICAL MARKET.

Business generally during the past week has been quiet, and there are but few changes to report. Bleaching powder is in moderate request at former rates. Caustic soda is a little firmer, but price remains unchanged. Saltcake sells freely at 27s. 6d. to 30s., at makers' works. Soda crystals move steadily at 50s, rails, at works. Nitrate of soda is firm at 8s. to 8s. 3d., and good business is passing at these figures. Sulphate of copper rather weaker, but there is no quotable change—£23. 10s. may be taken as to-day's value. Lead salts are more satisfactory, and slightly better prices are ruling. Acetate of soda stronger, to-day's quotation being £13 10s. nett. Borax steady at £16. crystal; £16. 10s. powder. White powdered arsenic is in good demand and is rathar scarce, £16. 10s. to £16. 15s. at Garston is to-day's lowest price. Tin crystals strong at 7¼d. per lb. Carbolic acids are dull and prices have a slightly downward tendency. The demand for textile chemicals is below the average.

REPORT ON MANURE MATERIAL.

Although the market continues firm in all departments there has been comparatively little buying, it being still too early for manure manufacturers to replenish their stocks. The quotations for the different descriptions of mineral phosphates are unchanged, and the attitude of raisers is very firm at all points. For River Plate bones for shipment the quotation is £4. 15s. per ton, nett cash, buyers paying landing charges, but no business has transpired. East Indian bone meal is firm at £5. 7s. 6d. per ton, ex store. For parcels afloat, £5. 3s. 9d. per ton, ex quay Liverpool, would probably be business, and for shipment £5. 2s. 6d. per ton is the nearest value. Nitrate of soda is very firm in all positions. The spot quotation for ordinary quality is 8s. per cwt., and that for fine quality 8s. 1½d. per cwt.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

OILS.—Palm oil is in fairly good request, but the offerings are small and prices are firm. Olive is steady, with a good business passing. Linseed oil is quiet at 19s. to 19s. 6d. for Liverpool makes in export casks. Cottonseed firm at 16s. 6d. to 17s. for Liverpool refined. Castor oil is inclined to be firmer in all positions, but at present sellers still offer good seconds Calcutta at 2 15/16d.; first pressure French 2 7/8d., and the same for Madras. Tallow is strong, with a quiet business passing at prices which favour sellers. Resin is firmly held, but there is only a small business doing. Spirits of turpentine firm at 33s. 6d. cwt. Petroleum quiet, and quotations are lower, American now figuring at 6d. to 7¼d., and Russian refined, 5½d. to 6d.

CAKES.—There has been only a quiet demand experienced for spot parcels of American Western linseed, but the quotation is unaltered at £6. 10s. to £6. 17s. 6d., whilst for other imported descriptions the demand has ruled exceedingly poor, and quotations are nominally repeated at £6. 18s. 9d. to £7. 5s for Bombay, and £7. 5s. to £7. 7s. 6d. per ton for Russian, the value of River Plate being quite nominal owing to the continued absence of supplies in first hands. Liverpool makes have sold to only a moderate extent at previous currencies, viz, £8 to £8. 10s. per ton, according to brand. Good to choice brands of American decorticated cottonseed are still quoted at £5. 15s. to £6, according to quality, but have been in only quiet request thereat, whilst at a partial decline of 2s. 6d. from Friday's rates, Liverpool makes have had rather a dragging sale, the value being now given at £6. 5s. to £6. 15s. per ton, according to brand. Liverpool undecorticated makes are rather steadier in tone at £4. 16s. 3d. to £5. 5s., according to brand, with moderate sales making thereat, and Egyptian on the spot are also a shade better, with a fair inquiry experienced for sound on spot at £4. 10s. per ton.

COLOURS.—Prices are steady, and practically without change. Ochres: Oxfordshire—common £10., medium £12., best £15.; Derbyshire—common 40s., medium 50s., best 60s.; Welsh—best 90s.; seconds, 50s., and common, 18s; Devonshire, 40s. to 45s.; French, J.C., 65s. Umber: 40s. to 45s. White lead: £16. Red lead unchanged. Venetian red: £6. to £10. Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7.; medium, £10.; finest, £20. Zinc oxide: £22. 10s. to £25.

THE METAL MARKETS.

LONDON, WEDNESDAY.—Pig iron steady: Scotch warrants closed at 54s. 3½d.; Middlesbrough, 47s. 6½d. cash; and hematite, 58s. 6d. Copper quiet: Chili bars, G.O.B.'s and G.M.B.'s, closed at £70. 17s. 6d. to £71. 2s. 6d. cash, and £70. 17s. 6d. to £71. 2s 6d. three months. Tin easier: Straits closed at £107. 12s. 6d. to £108. 2s. 6d. cash, and £107. 10s. to £108. 0s. three months; Australian, £108. 2s. 6d.; English ingots, £109. 10s. Lead steady: Spanish, £13. 17s. 6d. to £14.; English, £14. 2s. 6d.; Silesian spelter, ordinary, £27. Nickel, 1s. 2½d. Antimony, £39. Quicksilver: First hands, £8. 5s.; second hands, £8. 3s. 6d. *Copper shares* quiet: Cape, 4 1/16 to 4 1/8; Copiapo, 3 1/16 to 3 1/8; Libiola, 2⅛ to 2¼; Mason and Barry, 3⅜ to 3⅜; Rio Tinto, 39 7/16 to 39 11/16; Tharsis, 8½ to 8¾.

GLASGOW, WEDNESDAY.—Market flat, but a good business. Scotch done at 54s. 7d., 54s 7½d. and 54s. 3½d. cash; also at 54s. 10d., 54s. 6½d, and 54s 7d. month; buyers, 54s. 3½d. cash; sellers, 54s. 4d. Cleveland, buyers, at 47s. 6½d. cash; sellers, 47s. 7d.; Cumberland hematite done at 58s. 9½d. to 58s. 6½d. cash; and 59s. 2d to 58s. 10½d., month; buyers, 58s. 6d. cash; sellers, 58s. 7d. Middlesbrough hematite idle.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—Possibly the most interesting feature animating business circles here is the likelihood, however remote, of a combine, otherwise a scheme said to be originated by an American syndicate for forming a trust in the oil milling industry. The said syndicate is said to be meeting with some success in London and Liverpool, therefore any developments here may be anticipated at any time. The scheme may be said to effect roughly 36 oil mills here, varying in capital from £5,000. to £40,000 each. The stocks of seed in Hull month ending February were:—Linseed, 18,030 qrs., against 20,272 qrs. ending January; rapeseed, 7,228 qrs., against 10,550 qrs.; cottonseed, 570 tons against 308 tons; whilst the imports during the month were:—Linseed, 27,414 qrs., against 35,534 qrs.; rapeseed, 15,853 qrs., against 8,191 qrs.; cottonseed, 27,109 tons, against 14,117 tons. Linseed oil closes steady, 17s. 3d. spot, naked; 17s. month; 16s. 3d. May/August; 16s. September/December; boiled and refined, £1. to £1. 10s. per ton extra. Refined cotton dearer, being quoted 14s. 6d. spot; 14s. 9d. March/April; 15s. to 15s. 1½d. paid May/August; barrels, £1. 10s., and ordinary casks, £1. per ton extra. Oleines from £18. to £21. per ton. Castor oil, extracted here, cold drawn pharmaceutical, 28s. 6d. per cwt. in barrels, 3⅜d. per lb. in cases; pure first pressure, 26s. in barrels, 3 1/16d. per lb. in cases; seconds, 25s per cwt., in barrels, 2 15/16d. per lb. in cases. Cod oil, £16. to £18. per ton. Turpentine quieter. Olive oil, £31. 10s. to £33. Olive oil soap, £16. to £18 per ton. Resins unchanged.

CAKES.—The market is steady, with only a limited supply. Linseed cakes, 95% pure, £8. to £8. 2s. 6d. per ton, and steady thereat; oilcakes (linseed), £7. to £7. 2s. 6d.; Russians, £7. to £7. 15s. per ton. Cotton cakes a firmer tendency, best makes being quoted £5. 2s 6d. to £5. 5s.; seconds, £4. 17s. 6d to £5. 2s. 6d.; decorticated, £6. 10s Rape cakes: Black Sea, £4 5s.

PAINTS.—In improving demand; prices unchanged.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

The feeling in sulphate of ammonia has been very satisfactory to the makers all the week, although there has been no positive advance. There have been ready buyers at £10. 7s. 6d., prompt, f.o.b. Leith, and these are still willingly open for business at that figure. Makers, however, have views rather higher, and some of them are disposed to hold off on the chance of a definite rise. It is on rumour that higher money has been paid, but this wants confirmation, and buyers profess disbelief. There is nothing moving for forward delivery. Supplies are certainly in smaller volume than usual. The anticipated reaction in sulphate of copper has taken place, and price is now quoted 20s. down. Movement in the ordinary chemicals continues in moderately good force, at prices for the most part quite untouched. Mineral oils and paraffins all as before.

Chief prices current are:—Soda crystals, £2. 5s. to £2. 7s. 6d. basis nett, Tyne; soda ash, £4. 2s. 6d. to £4 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 5s. to £4. 15s. nett, Glasgow; caustic soda, white, 74° £7. 7s. 6d, 70/72° £7., 60/62° £6., and cream 60/62° £6., all nett, Liverpool; bleaching powder, 35/37°, £5. to £5. 10s. nett, Tyne; saltcake, 30s.; borax, English refined, £16., and boracic acid, £26. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s., nett, Liverpool; bichromate of potash, 3½d., less 6% for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d., less 6% for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow); chlorate of potash, 3½d., less 5% Liverpool; nitrate of soda, 8s. to 8s. 3d.; sulphate of ammonia, £10. 8s. 9d., prompt, f.o.b. Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £23. 10s., less 5% Liverpool; paraffin scale, hard, 1⅞d. to 2d. per lb., and soft 2d. per lb.; paraffin wax, 120° semi-refined, 2¼d. to 2½d. per lb.; paraffin spirit (naphtha), 9d. to 10d. per gal.; paraffin oil (burning), No. 1, 6½d.; and crystal, 7d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 15s. to £5. 5s., 885° £5. 10s. to £6., and 890/895° £6. 5s. to £6 10s. Week's imports of sugar at Greenock were 880 barrels and 10,948 bags beet unrefined.

TYNE CHEMICAL REPORT.

TUESDAY.

There is practically no change to report in the chemical market. Business continues quiet, and prices unaltered. Soda crystals are £2. 12s. 6d. per ton, gross weight, locally. Caustic soda: 70% £7., and 76/77% £8. per ton. Sulphur scarce at £4. 15s. per ton, nett.

Bleaching powder, softs, £5. 5s. per ton, nett; do., hards, £5. 10s. per ton, nett; caustic soda: 76/77% £8., and 70% £7. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do, 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75°Tw., £2. 12s. 6d. per ton, nett; do., 100°Tw., £3. per ton, nett; do., 140°Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. 0d. per ton, nett; blanc fixe, £6. 10s. per ton nett; chloride of barium, refined crystals, £6. 15s. 0d. per ton, nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt is steady at 9s. 6d. per ton, f.o.b. Tees.

COALS.—Trade continues firm, and prices are well maintained. Coke is very scarce, and in strong demand, both for home and export consumption. Best Northumbrian steam, 11s. to 12s. per ton; second qualities, 10s. to 11s. per ton; small steam, 4s. 9d. to 5s. per ton; gas coals, 10s. to 11s. per ton; bunker coals, 8s. to 8s. 6d. per ton; household coals, 10s. to 11s. per ton; coke, 18s. to 21s. per ton.

New Companies.

Anthracene Committee, Ltd.—Capital £95,000, in £1. shares. This company has been formed to adopt agreements (1) with the '95 Tar Products Committee, Ltd., and its liquidators, (2) with the '97 Poolers, and (3) with the '98 Poolers, and to buy, sell, prepare for market and refine anthracene. The subscribers to the memorandum of association are :—S. B Boulton, 64, Cannon-street, E.C., tar distiller ; C. D. T. Bushell, West Bromwich, tar distiller ; J. G. Lyon, Pontefract, tar distiller ; F. G. Holmes, Commercial Buildings, Leeds, tar distiller ; J. B. Butler, St. George, Bristol, chemical manufacturer ; F. Lennard, 70, Gracechurch-street, E C , tar distiller ; C. H. Bird, 38, Newport-road, Cardiff, tar distiller.

British Caucasian Synd., Ltd.—Capital £50,000. in £1. shares. This company has been formed to acquire any petroleum or oil-bearing lands in Russia or elsewhere, and to deal in and refine petroleum and other mineral oils and their products. The subscribers to the memorandum of association are :—W. B. Browning, 18, Water-street, Liverpool, merchant ; J. B. Wimble, 5 and 6, Billiter Avenue, E.C., shipowner ; R. H. Hughes, 192, Lordship-road, Stoke Newington, gentleman ; W. E. Hargreaves, Hoddesdon, gentleman ; J. S. Wellings, Bushey Grove-road, Bushey, Herts, accountant ; F. N. Mellersh, 283, Oxford-street, W., gentleman ; H. H. Keddall, Brentwood, Essex, gentleman.

General Sulphide Co., Ltd.—Capital £55,000 in 5,000 £10. ordinary and 5,000 £1. founders' shares. This company has been formed to adopt an agreement with D. G. Spiro, to work and develop the processes and patents mentioned in the said agreement, and to reduce ores of all kinds. The subscribers to the memorandum of association are :—A. H. Brooking, 78, Upper Berkeley-street, W., gentleman ; A. Howard, 8, West Chapel-street, Mayfair, gentleman ; D. G. Spiro, 3, Copthall Court, E C., gentleman ; J. Cotterill, 3, Copthall Court, E.C., gentleman ; A. J. Swan, 32, Melbourne Grove, East Dulwich, gentleman ; A. D. Brown, 31, Reighton-road, Upper Clapton, writer ; J. M. Lickfold, 33, Brunswick Square, W.C., journalist.

Somerset Fuller's Earth and Ochre Co., Ltd.—Capital £5,000. in £10. shares. This company has been formed to carry on the Fuller's Earth and Ochre Works, at Emborough, Somerset. Registered without articles of association by Turner and Co., 61, Carey-street, W.C.

Eckford's, Ltd.—Capital £5,000 in 400 £5. shares, and 3,000 £1. shares. This company has been formed to carry on the business of chemical manure manufacturers and dealers, etc. Registered without articles of association by W. J. Bradley and Sons, 11, Lower Ormond Quay, Dublin.

Gazette Notices.

PARTNERSHIP DISSOLVED.

W. B. Harvey, W. R. Harvey, and J. A. Croysdale, drysalters, Leeds, under the style of Harvey, Son, and Croysdale.

BANKRUPTCY ACTS, 1883 and 1890

Adjudication.

Oxley, Thomas, trading as William Oxley and Co., Eccles, Manchester, and Pendleton, mechanical engineer to chemical, dye, etc., works.

IMPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.

Week ending February 25th.

Acetic Acid—		
Holland,	50 pks.	Phillips & Graves
Germany,	11	L. & I. D. Jt. Co.
Holland,	17	H. Lorenz
,,	61	A. & M. Zimmermann
Belgium,	55	Leach & Co.
Acetone—		
Germany,	11 dms.	T. H. Lee
,,	1	R. W. Greeff & Co.
Holland,	2	T. H. Lee
Alkali—		
Belgium,	20 t.	H. Wallace & Co.
Alum—		
Holland,	720 pks.	J. White
Ammonium Phosphate—		
Holland,	2 cks.	Chemical Wks. (Late H. & E. Albert)
Antimony Ore—		
France,	10 c.	Girard Brs. & Co.
Straits,	3 t.	L. & I. D. Jt. Co.
Arsenic—		
Portugal,	51 brls.	Coverley & Westray
Barytes—		
Belgium,	34 pks.	W. Harrison
	34 cks.	& Co.
Germany,	48	J. L. Lyon & Co.
Holland,	24	P. Jantzen
,,	14	Robinson, Roberts & Co.
,,	154	Taylor Brs.
Belgium,	91	J. L. Lyon & Co.
Germany,	55	W. Harrison & Co.
Bleaching Powder—		
Germany,	23 cks.	J. M. Steel & Co.
Bleaching Soda—		
Germany,	108 c.	H. Lambert
Boracic Acid—		
Italy,	18 pks.	Nichs. Wvs, Ld.
Bromine—		
Germany,	20 cs.	A. & M. Zimmermann
Caoutchouc—		
Africa,	9 c.	Hale & Son
Brazil,	14	Prop. Bull Wf.
France,	29	H Johnson & Sons
E. Indies,	12	Lewis & Peat
U. States,	14	,,
Madagascar,	15	,,
France,	23	Girard Brs. & Co.
Sydney,	4	Anderson, Weber & Smith
Straits,	50	,,
Zanzibar,	30	L. & I. D. Jt. Co.
Madagascar,	6	,,
Africa,	5	,,
Belgium,	16	,,
E. Indies,	10	Prop. Bull Wf.
Sydney,	2	McIlwraith, McEacharn & Co.
Carbolic Acid—		
Germany,	5 dms.	T. H. Lee
Castor Oil—		
France,	15 cs.	C. Tennant, Sons & Co.
,,	35	F. Bochin
E. Indies,	75 cks.	J. W. Cook & Co., Ld.
France,	30 brls.	Lucas & Spencer's Wf., Ld.
,,	6	C. S. Lovell
Chemicals (*otherwise undescribed*)		
Germany,	£20	R. W. Greeff & Co.
Belgium,	8	T. H. Lee
Germany,	15	Butler's Wf., Ld.
France,	42	Mory & Co.
Germany,	230	L. & I. D. Jt. Co.
,,	5	W. J. Crook
,,	15	Craven & Co.
,,	63	J. Barber & Co.
Holland,	7	Beresford & Co.
,,	15	M. Benscher
,,	60	R. W. Greeff & Co.
Belgium,	18	John Cockerill Line
Germany,	8	Argo S. S. Co.
Holland,	15	T. H. Lee
Cape,	22	J. R. Thompson & Co.
,,	18	Chambers, Guthrie & Co.
Belgium,	133	E. E. Bailes
,,	168	T. H. Lee
Germany,	1,788	A. & M. Zimmermann
Citrate of Lime—		
Italy,	73 cks	Thames S. T. & L. Co., Ld.
,,	50	W. C. Bacon & Co.
,,	8	Fellows, Morton & Co.
Copper Sulphate—		
U. States,	381 brls.	J. Parker
Cream of Tartar—		
Spain,	5 pks.	W. C. Bacon & Co.
,,	5	B. & F. Wf. Co., Ld.
France,	3	C. Atkins & Nisbet
Portugal,	10 cks.	B. & F. Wf. Co., Ld.
France,	10 pks.	W. C. Bacon & Co.
,,	10	F. C. Devon & Co.
,,	10	B. & F. Wf. Co., Ld.
Disinfectants—		
Germany,	6 cs.	Butler's Wf., Ld.
Dyestuffs—		
Argols		
Italy,	1,018 pks.	B. Jacob & Sons
,,	61	Thames S. T. & L. Co., Ld.
Cape,	3	J. R. Thompson & Co.
,,	30	Chambers, Guthrie & Co.
Cochineal		
Canary Is.,	10 bgs.	W. M. Smith & Sons
Cutch		
Straits,	750 bxs.	J. Swire & Sons
Japan,	250	,,
Extract		
Denmark,	1 cs.	Masters Brs.
Austria,	130 cks.	Boutcher, Mortimore & Co.
Holland,	32	J. Norrenberg & Co.
Austria,	70 brls.	Bailey & Leetham
Denmark,	2 pks.	T. C. Glad & Co.
France,	26	Beresford & Co.
,,	210	T. H. Lee
,,	15	L. J. Levinstein & Sons
,,	80	B. & F. Wf. Co., Ld.
Denmark,	2	M. D. Co.
Gambier		
Straits,	919 bls.	Nichs. Wvs, Ld.
,,	168 bgs.	J Greig
Indigo		
E. Indies,	10 chts.	L. Archard & Co
,,	3	T. Barlow & Co.
,,	10	J. W. Cook & Co., Ld.
Belgium,	3	John Cockerill Line
E. Indies,	36	E. Bower & Co.
,,	71	J. Kenyon & Sons
,,	17	Croysdale & Co.
,,	44	Parsons & Keith
,,	53	Perkins & Homer
,,	224	L. & I. D. Jt. Co.
,,	28	B. W. Blydenstein & Co.
U. States,	7 srns.	W. J. & H. Thompson
E. Indies,	5 chts.	R. Von Glehn & Sons
,,	24	W. J. & H. Thompson
,,	80	Parry & Co.
,,	10	Schenker & Co.
,,	10	J. Owen
E. Indies,	7	756 pks. A B. Curtis & Co.
,,	135	J. Hatton Hall & Co.
,,	96	Elkan & Co.
,,	16	Dipnall & Co.
,,	26	Thomasset & Co.
Myrabolams		
E. Indies,	683 bgs.	Cayzer, Irvine & Co.
Orchella		
Ceylon,	35 bgs.	Dunlop Brs. & Co.
Shumac		
Italy,	68 bgs.	R. Waters
Tanners' Bark		
Adelaide,	6 t.	Leach & Co.
Tumeric		
Cochin,	60 bgs.	H. J. Perlbach & Co.
Valonia		
Turkey,	13 t.	Prop. Fenning's Wf.
,,	10	T. J. & T. Powell
,,	22	M. D. Co.
Farina—		
France,	53 cs.	H. Ewald & Co.
Italy,	250 bxs.	L. Terroni
Holland,	100 bgs.	G. Hornzee
Glucose—		
U. States,	1,900 pks.	3,887 c. R. G. Hall & Co.
,,	50	310 C. Barnard
,,	180	1,050 W. Grose & Co.
,,	200	1,187 Ohlenschlager Bros.
Germany,	20	22 M. D. Co.
Glue—		
France,	£16	Mory & Co.
Germany,	34	M. Dk. Co.
,,	45	L. & I. D. Jt. Co.
Austria,	320	J. Greig
Belgium,	685	T. M. Duche & Sons
France,	820	,,
Holland,	280	R. Ulrich
U. States,	200	Armour & Co.
,,	50	L. & I. D. Jt. Co.
Holland,	86	T. H. Lee
Germany,	213	Butler's Wf., Ld.
Belgium,	80	J. E. Kitton
Italy,	83	Thew & Skebal
Holland,	140	J. Mariars & Co.
France,	122	Burnett Brs. & Sons
Glycerine—		
Holland,	£500	J. Barber & Co.
Germany,	35	R. W. Greeff & Co.
Germany,	74	F. Bochin
Gutta Percha—		
Holland,	233 c.	J. Peet & Co.

Straits, 342 Gilman Brs. & Co.
" 360 H. W. Jewesbury & Co.

Lead Acetate—
Germany, £100 F. Bochin

Lithopone—
Holland, 40 pks. A. Zumbeck & Co.

Lysol—
Germany, £30 A. & M. Zimmermann

Manganese Ore—
Germany, 112 t. Blackwell & Co.
Australia, 50 c. L. & I. D. Jt. Co.
Germany, 15 t. Darling Brs.

Manure—
E. Indies, 270 t. A. Hunter & Co.
" 250 Fox, Roy & Co.
Cochin, 18 Couper, Friend & Co.

Methyl Alcohol—
U. States, 1,240 g. H. Wallace & Co.
Germany, 360 W. Iszard
France, 3,675 E. Catlin
" 1,110 Lister & Biggs
Germany, 1,310 "
Belgium, 130 T. Jones & Co.

Molasses—
U. States, 306 cks. 1,820 c. Deering & Robottom
U. States, 200 1,116 J. Forsey
Belgium, 100 200 R. G. Hall & Co.
Holland, 386 2,230 J. R. Francis & Co.

Ochre—
France, 10 cks. Sollar & Sons
" 114 W. Harrison & Co.
" 50 Z. Cartwright, Ld.
" 100 kgs. "

Paraffin Wax—
U. States, 1,062 cs. Anglo-American Oil Co.
" 25 brls. L. & I. D. Jt. Co.

Phosphates—
Belgium, 225 t. Chemical Works (Late H. & E. Albert)
" 150 Anglo-Contl. Guano Works
Bona, 1,550 Pickford & Wingfield
Holland, 150 Schofield, White, & Co

Pitch—
N. Russia, 700 cks. Linck, Moeller, & Co.
" 75 brls. Mordaunt Brs.
" 132 F. & S. Chiesman
Holland, 26 D. Smith

Potash Salts—
Germany, 100 bgs. H. Lambert

Potassium Bicarbonate—
Holland, 5 cks. A. & M. Zimmermann

Potassium Bromide—
Germany, £35 R. W. Greeff & Co.

Potassium Carbonate—
France, 1 t. J. A. Reid
Germany, 2 Petri Brs.
" 10 H. Lambert

Potassium Muriate—
Belgium, 90 bgs. H. & E Albert

Potassium Oxalate—
Holland, 30 pks. R. W. Greeff & Co.

Potassium Prussiate—
Italy, 9 cks. J. Owen

Potassium Sulphate—
Germany, 50 bgs. F. W. Berk & Co., Ld.
" 508 Anglo-Contl. Guano Works
" 50 F. H. Hendrichs
France, 1,200 Chemical Works
Belgium, 500 H. & E. Albert

Pyridine—
France, £130 J. Owen
" 5 drs. Page, Son, & Co.

Red Lead—
Germany, 36 cks. Fleming's Oil & Chemical Co.

Saltpetre—
Germany, 30 cks. L. & I. D. Jt. Co.
" 113 J. Hall & Son, Ld.
E. Indies, 113 bgs. Perkins & Homer

Salicylic Acid—
Germany, 32 pks. Butler's Wf., Ld.

Sodium Hyposulphate—
Holland, 4 cks. J. Owen
" 9 t. R. W. Greeff & Co.

Sodium Sulphate—
E. Turkey, 30 brls. L. & I. D. Jt. Co.

Starch—
Austria, 10 bgs. S. Potter
France, 80 cs. Lehmann & Co.
Holland, 480 A. Starck
" 124 Phillipps & Graves
" 2,756 Little & Johnston
" 40 Hernu, Peron, & Co.
" 50 pks. "
Belgium, 450 cs. Becker & Wagner
" 880 T. Ronaldson & Co.
" 49 Leach & Co.
" 30 pks. "
" 450 F. Claydon & Co.
" 25 Union L. Co., Ld.
Germany, 520 Horne & Co.
" 1,930 cs. "

Stearine—
Holland, 7 bgs. J. Owen
France, 315 H. Hill & Sons
" 200 G. Boor & Co.
Belgium, 125 H. Hill & Sons

Sulphur—
Spain, 350 t. J. Forster

Sulphur Chloride—
Holland, £28 Typke & King
" 20 pks. T. H. Lee

Tallow—
Chan. Is., 7 brls. Cheeswright & Ford
Germany, 8 Anning & Cobb
Sydney, 257 cks. Beresford & Co.
" 67 Phillipps & Graves
" 135 Union Ltge. Co., Ld.
" 301 Aust. Meat Co.
" 671 Anning & Cobb
Holland, 10 Phillipps & Graves
Sweden, 80 bgs. W. E. Bott & Co.

Tar—
Russia, 1,519 brls W. F. Malcolm & Co.
" 620 Linck, Moeller, & Co.
" 35 Mordaunt Brs.
" 58 F. & S. Chiesman & Co.

Tartar—
Italy, 23 cks. Thames S. T. & L. Co., Ld.
" 188 B. Jacob & Sons
" 21 Howards & Sons

Tartaric Acid—
Holland, 12 pks. F. C. Devon & Co.
" 2 Domeier & Co.
" 12 Kirkpatrick, Barr, & Co.
Belgium, 3 "
" 4 Howards & Sons
" 12 F. C. Devon & Co.
" 16 B. & F. Wf. Co., Ld.
Italy, 10 C. Christophersen & Co.

Ultramarine—
Holland, 20 cks. Thames S. T. & L. Co., Ld.
" 5 cs. Hernu, Peron, & Co.
Belgium, 7 pks. W. Harrison & Co.
Germany, 4 cks. Steinhoff, Sons, & Co.

Varnish—
U. States, 26 pks. Atlantic Transport Co.
" 10 Blundell, Spence, & Co.
" 8 Pinchin, Johnson, & Co.
Belgium, 10 T. H. Lee
France, 1 Mory & Co.
Germany, 2 Argo S. S. Co.

White Lead—
Holland, 99 cks. Randall Brs.
" 74 Burrell & Co.
" 142 pks. Taylor Brs.
" 50 T. & W. Farmiloe, Ld.
Belgium, 55 brls. "
" 48 pks. J. R. Francis & Co.
" 19 J. L. Lyon & Co.
" 67 cks. "
France, 16 J. Watt & Son
Germany, 50 Wilkinson, Heywood, & Co

Wood Pulp—
Sweden, 80 pks. Henderson, Craig, & Co
" 80 W. G. Taylor & Co., Ld.
" 500 Raby & Mather
" 680 Becker & Co.
U. States, 4,414 Henderson, Craig, & Co.
" 316 W. G. Taylor & Co., Ld.
" 673 W. D. Cork
Norway, 300 Johnsen & Jorgensen
" 1,600 J. Sharp
Belgium, 2,000 Pickford & Co.

Zinc Oxide—
Holland, 100 cks. W. Balchin, Ld.
" 117 J. Matton
" 60 brls. M. Ashby, Ld.
Germany, 50 cks. Prprs. Dowgate Dk.
Holland, 20 pks. J. Barber & Co.
Belgium, 50 G. S. N. Co.

LIVERPOOL.

Week ending February 23rd.

Aluminium—
Spain, 11 cs. Langstaff & Co.

Antimony—
Valparaiso, 164 bgs Hainsworth, Watson

Barytes—
Antwerp, 370 bgs.
Rotterdam, 74 cks.

Bones—
Ceara, 3,978 bgs. Boris Brs.

Castor Oil—
Calcutta, 590 cs. Ralli Bros.
" 200
Genoa, 40

Colours—
Stettin, 20 cks. W. Wilkinson & Son

Copper Sulphate—
Marseilles, 10 bgs.

Cottonseed Oil—
Savannah, 3 052 brls.
New York, 300
Charleston, 1,800
Norfolk, 2,498

Cream of Tartar—
Bordeaux, 78 cks.

Dextrine—
Alicante, 14 bgs.
Norfolk, 100 sks.

Dyestuffs—
Argols
Bordeaux, 90 bgs. 4 cks.
Cutch
Singapore, 1,230 bxs.
Rangoon, 1,025
Extracts
Alicante, 25 brls. 2 cs.
Nantes, 500 cks. J. R. Francis & Co.
Bordeaux, 315 "
Gambier
Singapore, 3,511 bls.
Indigo
Calcutta, 694 chts.
Myrabolams
Antwerp, 1 pk.
Bombay, 200 kgs.
" 900 D. Balriskna & Co.
" 2,310 D. Sassoon & Co.
Quebracho
Hamburg, 280 bgs.
Shumac
Palermo, 950 bgs.
Spain, 100 sks.
Valonia
Smyrna, 492 bgs.

Dyewood Extract—
New York, 320 brls. McArthur & Co.

Glucose—
Boston, 600 brls.
Norfolk, 499

Glue—
Philadelphia, 20 brls. Anglo-Am. Oil Co.
Rotterdam, 100 bgs.
Hamburg, 20

Glycerine—
Havre, 13 pks.

Manganese Ore—
B. Ayres, 100½ bgs. Rathbone Brs. & Co.

Manure—
Calcutta, 560 bgs.
B. Ayres, 420
Karachi, 4,720 4 bls.
Bombay, 1,900

Ochre—
Alicante, 100 bgs.

Paint—
Boston, 28 cs.

Paraffin Wax—
New York, 1,443 brls. Anglo-Am. Oil Co.

Potash—
New York, 25 cks.

Pulp (Mica)—
New York, 10 brls. House & Co.

Pyrites—
Huelva, 3,327 t. Mathieson & Co.

Red Lead—
Rotterdam, 22 cks.

Resin—
Baltimore, 1,648 brls.
Ceara, 59 brs. Rosing Brs.

Saltpetre—
Calcutta, 616 bgs. Ralli Brs
Hamburg, 4 cks.

Soap—
Marseilles, 10 cks.
Antwerp, 1 cs.

Sodium Phosphate—
Antwerp, 4 cks.

Starch—
Antwerp, 370 cs.
" 80 J. T. Fletcher & Co.
Alicante, 10 bgs.
Antwerp, 315

Stearine—
Antwerp, 32 bgs.

Sulphur—
Catania, 750 bgs 34 cks. 138 brls,

Tallow—
Pensacola, 245 brls.
Portland, 540
New York, 150 tcs.
Newport News, 127 250
Boston, 300 437
Portland, 200 cks.
B. Ayres, 558 400 hds. 165 pps.

Tartaric Acid—
Rotterdam, 4 cks.

Ultramarine—
Hamburg, 5 cks.
Rotterdam, 20

Varnish—
New York, 7 brls.

White Lead
Rotterdam, 20 cks.

Wood Pulp—
Boston, 53 crts. Colby & Co.
Rotterdam, 209 bls.

Zinc Oxide—
Antwerp, 28 brls.
New York, 130

MANCHESTER.

Week ending February 25th.

Alizarine—
Rotterdam, 32 cks.

Antimony Salt—
Rotterdam, 4 cks.

Barytes—
Antwerp, 100 bgs.
Hamburg, 1 ck.
Rotterdam, 200 bgs.

Borax—
Hamburg, 5 cks.

Coal Products—
Aniline Salts
Rotterdam, 5 cks.
Tar Salts
Hamburg, 3 cks.

Chromium Sulphate—
Rotterdam, 1 ck.

Colours—
Antwerp, 12 cks.
Rotterdam, 87 27 cs. 13 bxs. 41 brls.

Dyestuffs—
Indigo
Rotterdam, 22 chts.

Dyewood Extract—
New York, 45 bxs.

Farina—
Hamburg, 62 bgs.
Stettin, 1,150

Glue—
Antwerp, 5 bls. 52 pks.
Hamburg, 53
Rotterdam, 120 bgs. 40 cs.
Stettin, 41

Lime Acetate—
New York, 4,699 bgs.

Oxalic Acid—
Rotterdam, 27 cks.

Paraffin Wax—
New York, 320 cs. 944 brls.

Starch—
Antwerp, 240 cs.
Boston, 1,950 bgs.
New York, 625
Rotterdam, 80

Stearine—
Antwerp, 13 bgs.

Sulphuric Acid—
Rotterdam, 20 cks.

Tallow—
New York, 50 trcs.
Tartar Emetic—
Hamburg, 11 cks.
Ultramarine—
Hamburg, 4 cks.
Wood Pulp—
Christiania, 2,100 bls. W. H. Ingram
Drammen, 101½ bdls.
" 250 bls. "
Gothenburg, 5,223
Skien, 1,328 "
Stettin, 129
Zinc Oxide—
Antwerp, 6 cks.
New York, 200 brls.
Rotterdam, 50

HULL.

Week ending February 25th.

Acids—
Rotterdam, 3 cks. Hull & Netherlands S. S. Co.
Alizarine—
Rotterdam, 35 pks. 8 bxs.
6 brls. Hull & Netherlands S. S. Co.
38 cks.
Barytes—
Amsterdam, 100 bgs. Hull & Netherlands S. S. Co.
Antwerp, 37 cks. Bailey & Leetham, Ld.
90 bgs.
" 172 cks. H. F. Pudsey
" 100 bgs. Wilson, Sons, & Co. Ld.
15 cks.
Bremen, 23
Chemicals *(otherwise undescribed)*
Antwerp, 44 pks. Wilson, Sons, & Co., Ld.
41 cks.
Bremen, 1 cs. J. Pyefinch & Co.
Dunkirk, 80 cks. Wilson, Sons, & Co., Ld.
Hamburg, 3 Bailey & Leetham, Ld.
Rouen, 10
Colours—
Antwerp, 1 cs. Bailey & Leetham, Ld.
" 3 cks. Wilson, Sons, & Co., Ld.
54 pks.
Bremen, 11 cks Veltmann & Co.
1 cs.
Dunkirk, 25 brls. Wilson, Sons, & Co., Ld.
15 bxs.
Ghent, 9 cks.
Hamburg, 6 dms. "
" 12 pks.
Rotterdam, 22 Hull & Netherlands S. S. Co.
2 cs.
" 10 cks. Wilson, Sons & Co., Ld.
1 cs.
Rouen, 97 cks. Hull & Netherlands S. S. Co
Stettin, 30
Cottonseed Oil—
New York, 195 brls. Wilson, Sons, & Co., Ld.
Cream of Tartar—
Rotterdam, 2 cks. Hull & Netherlands S. S. Co.
Creosote Salts—
Rotterdam, 10 cks. Hull & Netherlands S. S. Co.
Cryolite—
Copenhagen, 4 cks. Wilson, Sons, & Co., Ld.
Dyestuffs—
Extracts
Dunkirk, 12 cks.
Rouen, 25
Indigo
Rotterdam, 2 brls. Hull & Netherlands S S Co.
Farina—
Antwerp, 175 bgs. Wilson, Sons, & Co., Ld
Harlingen, 200 bls. Hull & Netherlands S S Co.
Stettin, 100 bgs. W. Gilyott & Co.
Glucose—
New York, 100 brls.
Rotterdam, 100 bgs Hull & Netherlands S S Co.
Glue—
Antwerp, 2 cks. Bailey & Leetham, Ld.
Dunkirk, 30 Wilson, Sons, & Co., Ld.
Hamburg, 20 bgs.
Rouen, 12 bls.
2 pks.
Stettin, 2 cks. Wilson, Sons, & Co., Ld.
Glue Stock—
Hamburg, 19 bls. Wilson, Sons, & Co., Ld.
Linseed Oil—
Amsterdam, 600 brls. Hull & Netherlands S. S. Co.
Litharge—
Rotterdam, 15 cks. Hull & Netherlands S. S. Co.
Manure—
Odessa, 1,540 bgs.
Rotterdam, 10 Hull & Netherlands S. S. Co.
Paint—
Copenhagen, 1 bl. Wilson, Sons, & Co., Ld.
Paraffin Wax—
New York, 20 bgs. Wilson, Sons, & Co., Ld.
" 450 brls.
Phosphates—
Ghent, 1,000 bgs.
Dunkirk, 2,856 bgs Wilson, Sons, & Co., Ld.
Ghent, 1,000
Pitch—
Copenhagen, 650 brls. Wilson, Sons, & Co., Ld.
Red Lead—
Rotterdam, 33 cks. Hull & Netherlands S. S. Co.
Saltpetre—
Antwerp, 135 bgs. Wilson, Sons, & Co., Ld.
Hamburg, 2 cks.
Soda—
Antwerp, 150 bgs. Wilson, Sons, & Co., Ld.
Ghent, 40
Starch—
Amsterdam, 30 bgs. Hull & Netherlands S. S. Co.
Antwerp, 29 cs. Wilson, Sons, & Co., Ld.
Ghent, 165 "
Rotterdam, 36 Hull & Netherlands S. S. Co.
Stearine—
Antwerp, 15 bgs. Wilson, Sons, & Co., Ld.
Tallow—
Hamburg, 2 brls.
New York, 175 tcs. Wilson, Sons, & Co., Ld.
Tartaric Acid—
Rotterdam, 17 cks. Hull & Netherlands S. S. Co.
Ultramarine—
Bremen, 3 cks.
Rotterdam, 3 Hull & Netherlands S. S. Co.
Varnish—
Antwerp, 7 cs.
White Lead—
Amsterdam, 5 cks. Hull & Netherlands S. S. Co.
Antwerp, 24 Bailey & Leetham, Ld.
Rotterdam, 51 Hull & Netherlands S. S. Co.
Wood Pulp—
Bergen, 543 bls. Wilson, Sons, & Co., Ld.
Christiania, 3,784 "
Drontheim, 480 pks. "
Gothenburg, 338 bdls. "
" 78 pks "
Hango, 26 bls. J. Good & Sons
" 166 W. Shipstone & Co.
Zinc White—
Rotterdam, 15 cks. Hull & Netherlands S. S. Co.

GLASGOW.

Week ending March 2nd.

Acetic Acid—
Rouen, 12 cks.
Alizarine—
Rotterdam, 20 cks. J. Rankine & Son
33 brls.
Barium Sulphate—
Antwerp, 300 bgs. 34 cks.
Barytes—
Hamburg, 100 bgs.
Antwerp, 550
Boracic Acid—
Leghorn, 6 cks. 4 bls.
Castor Oil—
Antwerp, 55 cks.
Chemicals *(otherwise undescribed)*
Hamburg, 5 cs.
Coal Products—
Aniline
Rotterdam, 18 cks. J. Rankine & Son
13 cs.
Aniline Colours
Hamburg, 10 cks. 3 cs.
Aniline Salt
Rotterdam, 14 cks J. Rankine & Son
Colours—
Rotterdam, 20 brls. J. Rankine & Son
3 bxs. 90 pks.
Cream of Tartar—
Bordeaux, 8 cks.
Dyestuffs—
Extracts
Rouen, 7 cks.
Glucose—
New York, 150 brls.
Glue—
Rotterdam, 180 bgs. J. Rankine & Son
Antwerp, 10 bls.
Rouen, 10 19 cks.
20 bgs.
Lead Acetate—
Antwerp, 30 cks.
Ochre—
Rouen, 8 cks.
Paint—
New York, 70 kgs.
Messina, 26
Painters' Colours—
Antwerp, 2 cks. 7 cs.
Paraffin Wax—
New York, 690 brls. 220 cs.
Potash—
Rotterdam, 94 cks. J. Rankine & Son
Red Lead—
Rotterdam, 32 cks. J. Rankine & Son
Saltpetre—
Hamburg, 50 cks.
Soap—
Baltimore, 397 brls.
Leghorn, 25 cs.
Starch—
Antwerp, 80 cs
Rotterdam, 100
Stearine—
Antwerp 6 bgs.
Ultramarine—
Rotterdam, 2 cks. J. Rankine & Son
Waste Salt—
Hamburg, 500 bgs.
White Lead—
Rotterdam, 50 cks. J. Rankine & Son
Hamburg, 23
Wood Pulp—
Drontheim, 310 bls.
St. John, 2,215
Christiania, 2,421
Zinc Oxide—
Antwerp, 13 cks.
Zinc White—
Rotterdam, 50 cks. J. Rankine & Son

TYNE.

Week ending February 25th.

Barytes—
Amsterdam, 46 cks. W. Swanston & Sons
Rotterdam, 410 bgs. Tyne S. S. Co.
Castor Oil—
Antwerp, 56 brls. Tyne S. S. Co.
Colours—
Rotterdam, 1 ck.
Glue—
Hamburg, 40 bgs. Tyne S. S. Co.
Rotterdam, 2 cs. "
Paint—
Hamburg, 16 dms. Tyne S. S. Co.
Phosphates—
Antwerp, 300 bgs. Tyne S. S. Co.
Soap—
Laurvig, 30 brls. P. H. Matthiessen & Co.
Rotterdam, 88 cs. Tyne S. S. Co.
Starch—
Antwerp, 40 cs. Tyne S. S. Co.
Rotterdam, 144 "
Stearine—
Rotterdam, 14 bgs. Tyne S. S. Co.
Wood Pulp—
Christiania, 600 bls.
Gothenburg, 11 pks.
Zinc Sulphate—
Gothenburg, 80 bgs.

GOOLE.

Week ending February 22nd.

Alcohol—
Dunkirk, 1 ck.
Aniline—
Rotterdam, 460 cks. 3 pks.
85 cs.
Antimony—
Boulogne, 6 cks.
Barytes—
Antwerp, 110 bgs
Caoutchouc—
Boulogne, 15 cks.
Chemicals *(otherwise undescribed)*
Boulogne, 1 ck.
Hamburg, 7 cs.
Colours—
Hamburg, 21 cks. 4 cs.
Dyestuffs *(otherwise undes.)—*
Amsterdam, 3 cks.
Boulogne, 18 232 pks.
Farina—
Delfszyhl, 425 bgs.
Hamburg, 60
Glue—
Antwerp, 8 cks 17 bs.
Boulogne, 8
Phosphates—
Dunkirk, 1,600 bgs.
Potash—
Calais, 32 dms
Hamburg, 20 cks.
Potassium Sulphate—
Dunkirk, 20 dms.
Saltpetre—
Antwerp, 85 bgs.
Hamburg, 3 cks.
Soda—
Antwerp, 5 cks.
Sodium Silicate—
Rotterdam, 2 cks.

GRIMSBY.

Week ending February 25th.

Barytes—
Hamburg, 2 cks.
Rotterdam, 200 bgs.
Caoutchouc—
Antwerp, 1 cs.
Hamburg, 2
Rotterdam, 2
Chemicals *(otherwise undescribed)*
Antwerp, 3 cs. 10 dms.
Hamburg, 12 cks.
Rotterdam, 10
Colours—
Antwerp, 1 ck. 1 cs. 146 pks.
Hamburg, 126 1 91
Rotterdam, 6 5
100 bgs.
Dyestuffs—
Extracts
Antwerp, 39 cks.
Limestone—
Antwerp, 3 crts.
Magnesite—
Hamburg, 50 bgs.
Salt—
Hamburg, 800 bgs.
Saltpetre—
Antwerp, 68 bgs.
Soap—
Rotterdam, 92 bxs.
Zinc Ashes—
Antwerp, 8 cks.

EXPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending March 1st.

Acids—

Barbadoes,	15 cs.		£18

Alkali—

Shanghai,	2 c.		£5

Ammonia—

Calcutta,	3 cs.		£7
Antwerp,	41 cyldrs.		145
Cologne,	83		120
Dusseldorf,	71		90

Ammonium Carbonate—

Rotterdam,	2 t.		£53
Mossel Bay,	4 cs.		10
Calcutta,	5 cks. 17 / 5 c.		47
Paris,	1 t.		30
Adelaide,	5		10
Stettin,	13		13

Ammonium Chloride—

New York,	5 t.	4 c.	£107

Ammonium Muriate—

Auckland,	1 t.		£18
Sydney,	7	1 c.	130
Melbourne,	2	3	38
Cologne,	12 cks.		65

Ammonium Sulphate—

Martinique,	148 t.	3 c.	£1,655
St. Lucia,	11	3	125
Berbice,	15	4	160
Dunkirk,	150		1,536
Hamburg,	50	13	550
Canaria,	23		240
Madras,	2	7	40
Ostend,	370	3	3,768
Bremen,	20		205
Antwerp,	50		513
Cullera,	177	5	1,935

Arsenic—

Brisbane,	2 t.		£37
Auckland,		10 dms.	10

Bone Dust—

Martinique,	15 t.		£60

Borax—

Sydney,	40 kgs.		£42
Adelaide,	1 t.		17
Rotterdam,	2	16 c.	60

Calcium Chloride—

Napier,		40 dms.	£26

Caustic Potash—

Noumea,	4 c.		£7

Caustic Soda—

Vera Cruz,	4 t.	7 c.	£34
Lyttelton,		13	17
Dunedin,	1	10	37
Carnarvon,		2	5

Chemicals *otherwise undescribed*

Boston,	8 cs.		£61
B. Ayres,	10		31
Demerara,		33 pks.	53
Amsterdam,	3 kgs.		23
Bombay,	8		37
Antwerp,	2		35
Genoa,	20		116
Durban,	5		67
Dusseldorf,	16		113
Hamburg,	16	7	234
Paris,	18 cks.		28
Sydney,	20		60
Adelaide,	18		174
Karachi,	20		12
New York,	397		850
Auckland,		35	37
Cape Town,		11	50
Calcutta,	1	49	210
Adelaide,		9	27
Hamilton,		18	31
Philadelphia,	15		135
Bordeaux,	6		22
Boulogne,	2		32
Sourabaya,		4	21
Rotterdam,	1 / 10 kgs.		84
Shanghai,	2		6
Melbourne,		50	117
Oporto,	3 cks.		23
Wellington,		6	10
Durban,		7	21

Citric Acid—

Durban,	1 c.		£9
Reval,	7 cks. 13		285
Liban,	10 kgs.		70
Antwerp,	2		14
Copenhagen,	5		34
Brisbane,	10		69

Coal Products—

Alizarine

Boston,	20 cks.		£297

Aniline

Boulogne,		2 pks.	£12
New York,		12 dms.	360

Aniline Oil

Yokohama,		4 dms.	£17

Anthracene

Cologne,	310 cks.		£1,300
Rotterdam,	420		596

Benzine

Shanghai,	10 cs.		£11

Benzol

Yokohama,	9 cs.		£23
Brussels,		21 dms.	102

Benzoline

Teneriffe,		10 dms.	£6

Carbolic Acid

Rouen,	52 rnlts.		£160
Yokohama,		150 dms.	455
Marseilles,	9 cks.		24
Sydney,	2 cs.		7
Cape Town,		30	17
Paris,	32		150
Mauritius,	10	1 110	73
Ludwigshafen,	96		432
Toronto,	10		75
E. St. Louis,	176		1,357
Rotterdam,	25		100

Creosote

Dieppe,	23,500 galls		£123
New York,	3 cs		23

Creosote Salts

Philadelphia,	494 bgs.		£148

Naphtha

Melbourne,		12 dms.	£5
Singapore,		6	9

Pitch

Wellington,	8 brls.		—
N. Orleans,	200 cks.		£127
Antwerp,	28 1,190 t.		947
Cette,	1,579		1,758
Dunkirk,	560		690
Rotterdam,	1,050 brls.		903
New York,	16		35

Tar

Hamburg,	88 brls.		£39
Wellington,	4	30 dms	—
Las Palmas,	5		5
Cape Town,		10	4
Stettin,	100		45
Durban,		300	44
Adelaide		50	9

Copper Sulphate—

Paris,	40 t.		£950
Algiers,	20		489
Marseilles,	5		121
Rouen,	25		600
Treport,	41	18 c.	910

Cream of Tartar—

Auckland,	10 c.		£43
Wellington,	10		41
Brisbane,	10		38
Lyttelton,	3 t.	15	63
Dunedin,	1	5	94
Delagoa Bay,		8	33
Wellington,	1	10	112

Disinfectants—

Durban,	45 kgs.		£18
Penang,		630 pks.	260
Madras,		37	15
Sydney,	5 cs.		11
Brisbane,	11		26
Calcutta,		129	15
Cape Town,		218 / 50cdms.	205
Melbourne,	10	100	51
Adelaide,	6		16

Glycerine—

Yokohama,	1 t.		£47

Manure—

St. Lucia,	6 t.		£65
Colombo,	11	1 c.	100
Cape Town,	10		45
Demerara,	53	16	462
Las Palmas	4		19
Durban,	25		60
Hamburg,	50	4	170
Malaga,	20	6	150
Berbice,	10		98
Pt. Limon,	100		800
Cullera,	472	14	1,720
Bordeaux,	52		£2 8
Madeira,	50		330
Rouen,	91	8	285
Trinidad,	440		2,700

Oxalic Acid—

Dunedin,	4 cks.		£29

Pearl Ashes—

Cape Town,	10 c.		£8

Potassium Chlorate—

Sourabaya,	10 c.		£17

Potassium Cyanide—

Fremantle,	4 t.	19 c.	£364
Townsville,	16		1,900
Singapore,		25 cs.	280
Melbourne,	9	13	850
Auckland,	24	10	2,122
Delagoa Bay,		143	1,183
Cologne,		5	26
Melbourne,	11	13	1,045
Paris,		81	431
Tampico,		103	587
La Paz,		100	612
B. Ayres,	1		122

Potassium Prussiate—

Yokohama,	1 t.	10 c.	£92

Sal-ammoniac—

Wellington,	5 c.		£9
Pt. Elizabeth,	10 cs.		35

Saltpetre—

Wellington,	10 c.		£11
Oporto,	5 t.	10	105

Sheep Dip—

B. Ayres,	33 t.	3 c.	£964
E. London,		60 dms.	21

Soda—

Malta,	2 t.	10 c.	£10
Paris,	5	8	97

Sodium Bicarbonate—

Auckland,	1 t.		£6
Mossel Bay,	1		7
,,		12 c.	3
Gijon,	8	2	46
Sourabaya,	1		6

Sodium Carbonate—

Carnarvon,	5 c.		£14

Sodium Prussiate—

Hamburg,	5 t.	3 c.	£74
Antwerp,	7	18	370

Sulphur—

Durban	1 t.	10 c.	£10
Auckland,	1		5
Pt. Elizabeth,	1	11	10

Sulphuric Acid—

Madras,	18 c.		£12

Superphosphates—

Bundaberg,	20 t.	6 c.	£293

Tartaric Acid—

Karachi,	4 cs.		£21
Wellington,	5 c.		29
Adelaide,	5		29
E London,	2		14

LIVERPOOL.

Week ending March 1st.

Acetic Acid—

Barcelona,	3 t.	18 c.	£79

Alkali—

Piræus,	27 t.	15 c.		£113
Galatz,	5	4	3 q.	21
Salonica,	5			20
Pelotas,	1	1		5
Rosario,		14		3
Kingston,	10		3	21
Calcutta,	13		2	53

Alum—

Smyrna	3 t.	14 c.	3 q.	£20
Melbourne,	1			5
Bari,	1			5
Rangoon,	6	1		35
San Francisco,	20	7	2	95

Ammonia—

Coquimbo,		15 c.		£17
Antofagasta,		5		6

Ammonium Carbonate—

Gothenburg,		10 c.	2 q.	£16
Bremen,	1 t.	1		29
Genoa,	3	10		90
Hiogo,	2			52
N'castle N.S.W.,	1		1	26
Havana,	1			33
Para,		3		6

Ammonium Muriate—

Christiania,	10 c.		£13

Ammonium Sulphate—

Cullera,	151 t.	15 c.	3 c.	£1,506
Genoa,	10			98
Bordeaux,	21			212
Valencia,	419	13	3	4,268
Gd Canary,	32	18	2	405
Palermo,	4	19		51
Philadelphia,	52			532
Santa Cruz,	20	9		210
Las Palmas.	55	10		571

Amorph. Phosph rus—

Hiogo.	90 cs.		£961
Shanghai,	54		430

Arsenic—

Rouen,	7 t	16 c.	£179

Barium Carbonate—

St. John's,	1 t.	7 c.	£8

Basic Slag—

Granville,	490 t.		
Portland, M.	13	8 c.	£20
,,	134 bgs.		

Bleaching Powder—

Amsterdam,	50 cks.		
Antwerp,	44		
Barcelona,	23		
Bombay,		30 cs.	
Calcutta,	10		
Genoa,	222		
Havana,	20		
Leghorn,	20		
Lisbon,	20		
Milwaukee,	121		
Muncil,	68		
Nantes,	25		
New York,	79		
Philadelphia,	57		
St. John, N.B.,		10 brls.	
San Sebastion,	29		
Seville,		45	

Borax—

Vera Cruz,	2 t.	15 c.	1 q.	£40
Portland, M.,	10	5	2	175
Halifax,		18	3	15
Antwerp,	3	5	1	53
Karlshrona,	10	1		161
Bremen,	26			214
Rio de Janeiro,		5		14
Danzig,		11	1	178
Sydney,	3			41

Calcium Chloride—

Odessa,	20 t.	4 c.	£42
Fiume.	4	19	1
Rangoon,	2	1	
Bari,	30	3	6

Carbolic Acid—

Antwerp,	50 cks.		
France,		6 btls.	
Hamburg,		28	
Hiogo,	50		
Kobe,	120		
New York,	38		
Rotterdam,	37		
Vera Cruz,	5		
Rouen,	3 t.		£12

Caustic Soda—

Alexandria,	21 dms.		
Antwerp,	15		
Ancona,	42		
Barcelona,	35	25 cks.	168 pks.
Boston,			25 brls.
B. Ayres,	50		
Cadiz,		25	
Callao,	85		
Catania,	31		
Chicago,	50		
Fiume,	35		
France,	104		
Fremantle,	30		
Galatz,	488		
Genoa[1]	47		
Ghent,	16		
Hamburg,	84		
Havana,	20		
Hiogo,	323		
Hong Kong,	143		
Ibrail,	20		
Leghorn,	105		
Kingston,	28		
Limassol,	10		
Limon,	20		
Lisbon,	85		
Malaga,	10		
Malta,	15		
Mauritius,	16½		
Melbourne,	179		
Napanee,	35		

Naples, 67 50 bgs.
Newcastle, 193
Odessa, 16
Para, 40
Pasages, 50
Pelotas, 7
Piræus, 18
Pisco, 30
Porto Alegre, 50
Rotterdam, 38 10 cks.
Seville, 590
Sousse, 15
Sydney, 70
Tarragona, 80 45
Tokio, 30
Toronto, 15
Valencia, 50
Trieste, 28
Vera Cruz, 100
Zacatecas, 74

Chemicals *(otherwise undescribed)*
Cape Town, 3 c. £4
Havana, 2 t. 2 32
Natal, 1 17
Antwerp, 5 3 66
Brisbane, 3 49
Reval, 1 10 160
Melbourne, 6 102
Philadelphia, 23 17 645
Odessa, 18 8 1 q. 466
Madras, 1 5
Bombay, 10 kgs. 30

China Clay—
Barcelona, 231 pks.
Bombay, 1,309 cks. 180 bgs.
Boston, 1,140
Oporto, 20
Philadelphia, 933 393
Torino, 40

Coal Products—
Aniline Oil
Barcelona, 14 cks.
Boston, 1 dms.
Aniline Colours
Barcelona, 7 kgs 2 cs.
Bombay, 3
Boston, 1
New York. 17 cks. 29 pks.
Philadelphia, 5 brls.
Aniline Dyes
Barcelona, 3 cs.
Tangiers, 2
Aniline Salt
Boston, 20 cs.
Philadelphia, 20
Vera Cruz, 10 cks.
Creosote Oil
Bordeaux. 656 cks.
Naphthaline Co our
New York, 2 cks.
Pitch
Galatz, 30 brls.
Leghorn, 20 t. 7 c.
Tar
Galatz, 20 brls.
St. John's, Nfd., 130½
Sierra Leone, 30 pks.

Copperas—
Samarang, 12 t. 2 c. 3 q. £32

Copper Sulphate—
Piræus, 1 t. 12 c 2 q. £33
Algiers. 68 6 2 1,400
Rouen, 10 5 203
Bone, 2 18 1 52
San Sebastion, 5 3 173
Genoa, 183 16 3 3,703
Odessa, 35 19 737
Galatz, 19 12 376
Venice, 54 14 1 1,087
Leghorn, 57 3 3 968
Bordeaux, 672 12 14,038
Ancona, 81 3 1 1,641
Brindisi, 22 5 491
Lisbon, 56 6 1 1,084
Oporto, 31 15 549
Trieste, 50 2 1,122
Bahia, 19 17
Nantes, 45 1,095
Penang, 1 10 40
Naples, 34 1 681
Rangoon, 10 11
Bari, 4 18 2 100
Patras, 9 8 2 201
Zante, 3 2 1 67
Madras, 11 13

Disinfectants—
B Ayres, 5 t. £25

Dried Blood—
Las Palmas, 6 t. 5 c £55

Glycerine—
Pelotas, 4 c. £12
Antwerp, 4 t. 19 1 q. 275
Bombay, 2 14 1 110
Hiogo, 1 60
Osaka, 1 12 96
Sydney, 2 104
M. Video, 1 60
Valparaiso, 15 galls. 2 dms. 5
Rangoon, 2 cs. 11

Gypsum—
Calcutta, 4 t. 2 q. £18

Hydrochloric Acid—
Coquimbo, 6 c. 2 q. £17

Magnesia—
Adelaide, 6 cs.
Lisbon, 1
Monterey, 1
Rosario, 4
Vera Cruz, 5

Magnesium Sulphate—
New York, 9 cks.
Piræus, 20 bgs.
Vera Cruz, 4

Manure—
Bordeaux, 17 t. 13 c. £100
Valencia, 20 69
Genoa, 40 3 171
Antwerp, 2 9 1 q. 9

Nitric Acid—
Coquimbo, 8 c. 2 q. £31

Oxalic Acid—
Boston, 14 t. 16 c. £390
Philadelphia, 5 11 145

Paint—
Accra, 64 kgs.
Amapala, 12 cs.
Antwerp, 38 pks.
B. Ayres, 10
Calcutta, 75 dms.
Callao, 5
Carupano, 100
Conakry, 64
Coquimbo, 23
Hong Kong, 1 1 brl. 53
Lagos, 65
Las Palmas, 15
Malta, 8
M. Video, 10 cs.
Old Calabar, 4 cks.
Pt. Said, 40
Praia, 20 dms. 1 3
Rangoon, 8 7
St. John's, Nfd, 304 3
Valparaiso, 24
Vancouver, 42 dms.
Vera Cruz, 12

Painters' Colours—
Bahia, 2 brls.
Boston, 26 bgs.
B. Ayres, 263 pks.
Bremen, 531
Havana, 20 kgs. 7 2 cs.
Ibrail, 100 brls.
Madras, 3 cs.
M. Video, 3 cks.
Para, 27 18 brls. 5
Rettimo, 4
Taltal 24 pks.

Paraffin Wax—
Ibrail, 10 kgs.
Rio de Janeiro, 6 cs.
Salonica, 10

Phosphorus—
Kobe, 12 c. £81

Potash—
Manaos, 5 c. £6

Potashes—
B. Ayres, 2 t. 3 c. £60

Potassium Bicarbonate—
Cyprus, 3 c. £5
Rio de Janeiro, 14 1 q. 23
Stettin, 1 t. 32

Potassium Chlorate—
Bilbao, 1 c. £3
Copenhagen, 20 t. 60
Gothenburg, 5 160
Havana, 1 5 38
New York, 10 18
Palermo, 10 15
Rotterdam, 10 17

Potassium Chromate—
Genoa, 9 c. 3 q. £21
Syra, 7 15

Potassium Prussiate—
Seville, 3 c. £17
Vera Cruz, 1 t. 63

Salammoniac—
Alexandretta, 1 t. 5 c. £42
Bombay, 3 6 101
Genoa, 1 2 33
Leghorn, 1 14 2 q. 56
Philadelphia, 5 6 2 175
Samsoun, 1 31
Smyrna, 5 brls. 25

Salt—
Ambrizette, 2 t.
Antwerp, 6,290 sks.
Bakana, 80
Baltimore, 621
Barbadoes, 220 bgs. 1,000
Bermuda, 100
Bombay, 50 cs.
Boston, 50 t. 1,300
Calcutta, 3,227
C. C. Castle, 79 10 c.
Cienfuegos, 60
Conakry, 51 3
France, 10
Galveston, 200
Ghent, 125
Gibara, 34 17
Gd. Bassa, 13 16
Gd. Lahou, 22 8
Havana, 100
Lagos, 200
Lahou, 22 4
Melbourne, 114
Monrovia, 34 14
Newcastle, 40
N. Orleans, 280
Old Calabar, 50
Para, 250
Portland, Me., 46 15
St. John's, N.B., 45 5
Santiago de Cuba, 17 10
Sierra Leone, 150
Sinoe, 15
Sydney, 100
Sulymah, 46 17
Tokio, 25 cs.
Warri, 31 3 c.

Saltpetre—
Barcelona, 9 c. 3 q. £23
Halifax, 3 2 11
Para, 12 10

Sheep Dip—
B. Ayres, 650 dms.
M. Video, 2 t. 10 c. £32
Owen Sound. 2 5 48
Punta Arenas, 16 15 3 q. 375
St. John's, 1 2 22

Soap—
Accra, 423 bxs.
Alexandria, 10 cs.
Algoa Bay, 1,855
Antwerp, 44 pks.
Axim. 200
Bangkok, 50
Belize, 600
Bombay, 417 11
Cairo, 40
Calcutta, 77 100 7 cks. 259 bdls.
Canaria, 208
C. C. Castle, 300
Cape Town, 60
Buluwayo, 50
Colombo, 21
Conakry, 190
Constantinople, 7 brls.
Egwanga, 500
Forcados, 87
Fresco, 50
Greytown, 580
Johannesburg, 50
Kimberley, 20 cs.
Kingston, 2,000
Lagos, 283 20 dms.
La Plata, 10
Lucea 100 1
Macassar, 100
Madras, 80
Manaos, 1,030
Monrovia, 35
Montreal, 2
Newcastle, 23 tnks.
Para, 400 125 bdls.
Pt. Elizabeth, 500 100 7
Pt. Natal, 7,240 11
Rotterdam, 159 dms.
St. Kitts, 310
St. Lucia 95
Sierra Leone, 245
Surinam, 125
Tampico, 1
Teneriffe, 174
Trinidad, 1,250
Valparaiso, 50

Soda—
Hong Kong, 500 kgs.
Rio de Janeiro, 2

Soda Ash—
Amsterdam, 200 bgs.
Ancona. 50
Baltimore, 21 cks
Barcelona, 56
Boston, 200 38 tcs. 89
B. Ayres, 240 brls.
Calcutta, 285 kgs. 165
Callao, 50
Constantinople, 200 bgs.
Fremantle, 64
Ghent, 200
Gothenburg, 10 pks
Halifax, 4 kgs. 10 bgs.
Hiogo, 150 cks.
Hobart Town, 7
Kingsey Falls, 100
Kobe, 117
Leghorn, 50
Melbourne, 415
Mombassa, 5
M. Video, 50 50
Nagasaki, 4
New York. 500 31 tcs.
Perth, 65
Rio de Janeiro, 75 brls.
Seville, 150
Varna, 60

Soda Crystals—
Calcutta, 33 kgs.
Callao, 4 cks
Constantinople, 150 brls. 50
Gibraltar. 50
Halifax, 84 pks.
Lisbon, 7
Malta, 20 90
Moneton, 25 kgs.
M. Video, 20
Piræus, 35
St. John's, N.B., 34
Stamboul, 60

Sodium Bicarbonate—
Ancona 102 pks
Antwerp, 55 kgs. 10
Barcelona, 45
Bari, 60
Braila, 31
Cadiz, 10
Cairo, 70
Calcutta, 500
Callao, 20
Corunna.
Fremantle, 250
France, 70 10
Genoa, 235
Halifax, 30 20 m
Hong Kong, 100
Johannesburg, 24
Karachi, 100 ks
Lisbon, 40
Madras, 125
Malta, 14
Melbourne, 617
Mombassa, 5
M. Video, 70
Nagasaki, 200
Odessa, 150
Patras, 30
Pt. Elizabeth, 50
Rotterdam. 40 50
St. John's, N'fd., 30
Seville, 230 8
Sydney, 34
Vancouver, 11

Sodium Carbonate—
Havana, 10
New York. 56

Sodium Chlorate—
Boston, 225 kgs.
France, 8 cks.
Reval, 150 kgs.

Sodium Silicate—
Genoa, 70 rls.
Mauritius, 5

Sodium Sulphate—
Piræus, 9 t. 5 c.

Sulphur—
Boston, 25 t. 1 c.
B. Ayres, 20
Gothenburg, 20
Halifax, 1
Savanilla, 8

Superphosphates—
Antwerp, 9 t. 17 c.
Bordeaux, 19 13 2 q.
Cullera, 467 2
Gandia, 30
Genoa, 51 2 1
Gd. Canary, 5
Nakskov, 1,100
Nantes, 293 13 3
Valencia, 633 1 2

Tallow—
Amsterdam, 22 cks.
Bombay, 47
Genoa, 3
Hamburg, 55
Nantes, 42 brls.
Salaverry, 4
Seville, 28 bdls.

Varnish—
Barcelona, 12 cks.
Bilbao, 1 cs.
Genoa, 6
Halifax, 1 7 8 pks. 2 dms.
Leghorn, 3
Osaka, 15
Pt. Said, 2
Rio de Janeiro, 2
Valparaiso 7

Venetian Red—
Chicago, 106 brls.
Danzig, 200 bgs.
Galatz, 180 kgs
Galveston, 97 pks.
Newport News, 100
New York, 202
San Francisco, 50 50
Rotterdam, 50 bgs. 8 cks.

White Lead—
Vera Cruz, 8 kgs.

Zinc Chloride—
Bombay, 9 t. 18 c. 2 q. £156
Piræus, 4 2 55

MANCHESTER.

Week ending March 1st.

Coal Products—
Aniline Colours
Germany, 9 kgs.
Aniline Oil
Germany, 5 dms.
Tar Oil
Belgium, 10 brls.
Tar Salts
Russia, 35 bgs.

Glue—
Germany, 5 cks.
Holland, 12

Magnesia Salts—
Gothenburg, 41 bgs.

Soap—
Bombay, 4 cs.
Holland, 70

Sodium Naphthionate—
Reval, 26 bgs.
Switzerland, 17 cks.

Zinc Chloride—
Germany, 20 cks.

HULL.

Week ending February 25th.

Alkali—
Bergen, 4 dms.
Drontheim, 200 bgs.

Ammonium Sulphate—
Ghent, 100 bgs.
Palermo, 399
Venice, 300

Chemicals *(otherwise unde cribed)*
Amsterdam, 41 cks.
Antwerp, 1
Bari, 10 cs. 2 pks.
Bergen, 2
Bremen, 10
Christiania, 14 5 67
Copenhagen, 5 20 btls.
Drontheim, 2
Ghent, 4
Gothenburg, 5 37 358 slbs.
Hamburg, 1 50
Hango, 4
Reval, 35 pks.
Rotterdam, 11 60
Rouen, 50
Stettin, 6

Cottonseed Oil—
Amsterdam, 35 t. 4 c.
Antwerp, 18 12
Christiania, 5 5
Ghent, 10 2
Hamburg, 7 13
Rotterdam, 56 14
Rouen, 10 2

Dyestuffs *(otherwise undescribed)*
Bergen, 1 ck.
Drontheim, 3 cs.
Reval, 3

Linseed Oil—
Antwerp, 8 t. 7 c.
Christiania, 1 18
Copenhagen, 17
Drontheim, 5 14
Hamburg, 16 13

Manure—
Dunkirk, 625 bgs.
Guernsey, 102
Venice, 10 t.

Paint—
Amsterdam, 2 cks.
Antwerp, 12 5 cs.

Painters' Colours—
Amsterdam, 20 cks. 2 dms.
Antwerp, 33 175 pks. 26 dms
Bergen, 30
Copenhagen, 6 6 8
Christiania, 2 1 13 pks.
Drontheim, 40
Dunkirk, 2
Ghent, 4
Hamburg, 21 4
Rotterdam, 44
Rouen, 8
Stavanger, 56

Phosphates—
Venice, 209 t.

Pitch—
Antwerp, 243 t.
Dunkirk, 217

Rosin—
Rotterdam, 10 brls.

Soap—
Amsterdam, 25 cs.
Hango, 20

Starch—
Bergen, 1 cs

Stearine—
Trieste, 58 cks.

Tallow—
Amsterdam, 14 cks.

Tar—
Amsterdam, 2 cks.
Copenhagen, 26
Hamburg, 5
Rotterdam, 17
Stettin, 10

Varnish—
Amsterdam, 5 cks. 1 cs.
Antwerp, 1 8 2 dms.
Ghent, 1
Gothenburg, 1
Stavanger, 1

Waste Salt—
Amsterdam, 20 brls.

GLASGOW.

Week ending March 2nd.

Alkali—
Amsterdam, 1 t. 18 c.

Alum—
Calcutta, £30 10s.

Ammonium Sulphate—
Hamburg, 50 t. 15 c.

Arsenic—
New York, £384

Borax—
Antwerp, £118
Rotterdam, 410

Coal Products—
Creosote
Bayonne, £1,050
Creosote Oil
Christiania, £6
Naphtha
Rotterdam, £690
Pitch
Bombay, £42
Gothenburg, 185
Hamburg, 11 t. 14 c.
Montreal, 25
U S A., 60
Tar
Bombay, £214 12s.
Calcutta, 5 10

Dried Blood—
Nantes, 5 t.

Farina—
Algoa Bay, £20
Amsterdam, 77
Calcutta, 49
Gothenburg, 22

Glue—
Algoa Bay, £40

Guano—
Malaga, 20 t. 1 c. 3 q.

Lead Acetate—
Montreal, £55

Linseed Oil—
Algoa Bay, 2 t.
Cape Town, 1 14 c. 2 q.
Havana, 1 15

Litharge—
Rotterdam, £6

Paint—
Hong Kong, £70
Singapore, 36

Painters' Colours—
Calcutta, £263 6s.
Cape Town, 38
Johannesburg, 47
M. Video, 40
Pt. Elizabeth, 26

Paraffin Wax—
Bilbao, 355 t.
Christiania, 2 11 c. 2 q.
Gijon, 264
Rio de Janeiro, 100
San Sebastian, 101

Potash—
Amsterdam, £227

Potassium Bicarbonate—
Antwerp, £287
Basle, 288
Seville, 35

Potassium Bichromate—
Brussels, £137
Ghent, 23

Potassium Cyanide—
Fremantle, £963

Red Lead—
B. Ayres, £61 10s.

Sheep Dip—
B. Ayres, £74

Soap—
Calcutta, 2 t. 7 c. 2 q.
Shanghai, 2 10 3

Sodium Bicarbonate—
Antwerp, 1 t. 18 c. 1 q.
Ghent, 4 9 1
Nantes, 5 2

Sodium Sulphate
Gothenburg, £20

Starch—
Rotterdam, £180

Tartar Emetic—
Rio de Janeiro, £40

Varnish—
Shanghai, £20

TYNE.

Week ending February 25th.

Alkali—
Antwerp, 8 t. 8 c. 3 q.
Christiania, 1 14 2
Gothenburg, 5 6 2
Venice, 4 9 3

Alum—
Seville, 4 t. 19 c. 2 q.

Aluminium Hydrate—
Antwerp, 5 t. 3 c. 3 q.

Aluminium Sulphate—
New York, 12 t 6 c. 3 q.
Rouen, 4 18 4

Ammonium Carbonate—
Seville, 10 c.

Ammonium Sulphate—
Rotterdam, 90 t. 2 c. 2 q.

Antimony—
Hamburg, 12 t. 5 c.
New York, 30

Barium Binoxide—
Rotterdam, 5 t. 10 c. 2 q.
Rouen, 21 8 1

Barytes—
Rouen, 5 t.

Bleaching Powder—
Amsterdam, 14 t. 8 c. 3 q.
Antwerp, 10 1 1
Christiania, 33 17 1
Copenhagen, 2 14 2
Gothenburg, 30 5
Hamburg, 6 17 2
New York, 60 6 3
Rotterdam, 7 18 3

Bones—
Dunkirk, 12 t. 1 c.

Caustic Soda—
Antwerp, 9 t. 17 c. 1 q.
Bergen, 2 18
Christiania, 2 18
Copenhagen, 4 7
Gothenburg, 50 4
New York, 100 9
Rotterdam, 8 9
Seville, 33 17 1
Venice, 2 18

Litharge—
Copenhagen, 6 c.
Rouen, 12

Magnesia—
Genoa, 1 c.
Hamburg, 2 t. 8 1 q.

Magnesium Sulphate—
Seville, 4 t. 8 c.

Paint—
Antwerp, 4 t. 5 c.
Bergen, 2
Copenhagen, 3
Hamburg, 2 2
Rotterdam, 1

Painters' Colours—
Rotterdam, 2 dms.

Phosphates—
Bergen, 5 t.

Phosphorus—
Seville, 7 c. 3 q.

Red Lead—
Bergen, 5 t. 19 c. 1 q.
Christiania, 7 8 2
Copenhagen, 7 15
Genoa, 34 3
Gothenburg, 9 14 2
Hamburg, 4 4 2
Odense, 16 2
Rouen, 1 7 3

Soda—
Christiania, 7 t. 7 c. 1 q.
Rotterdam, 35 4 3
Venice, 13 19 2

Soda Ash—
Rotterdam, 3 t. 18 c. 1 q.

Sodium Hyposulphite—
Christiania, 19 c. 3 q.

Sodium Nitrate—
Seville, 5 t. 3 q.

Sodium Silicate—
Christiania, 2 t. 3 c. 1 q.
Seville, 14 13 1

Sulphur—
Gothenburg, 50 t.

Tallow—
Genoa, 6 t. 2 c. 3 q.

White Lead—
Copenhagen, 1 t. 1 c. 3 q.
Hamburg, 10
New York, 15 7 1

GOOLE.

Week ending February 22nd.

Caoutchouc—
Boulogne, 9 cks.

Chemicals *(otherwise undescribed)*
Hamburg, 18 cks. 50 dms

Coal Products *(otherwise unstes.)—*
Amsterdam, 24 cks.
Antwerp, 102 1 cs.
Boulogne, 46 12 tins
Hamburg, 4
Rotterdam, 5 1

Dyestuffs *(otherwise undescribed)*
Ghent, 3 cs.

Manure—
Ghent, 674 bgs

Painters' Colours—
Boulogne, 2 cks. 2 cs.
Ghent, 7
Rotterdam, 1

Pitch—
Antwerp, 250 t.

GRIMSBY.

Week ending February 25th.

Caoutchouc—
Malmo, 4 cs.

Chemicals *(otherwise undescribed)*
Hamburg, 50 dms.
Malmo, 2 cks.

Coal Products *(otherwise undes.)—*
Dieppe, 1 kg. 112 cks.
Hamburg, 16 cs.
Rotterdam, 10 btls.

Manure—
Hamburg, 134 bgs.

Painters' Colours—
Antwerp, 6 cks.
Hamburg, 21 1 pk.
Rotterdam, 4 kgs. 14 cks. 6

Pitch—
Antwerp, 92 t. 10 c.

PRICES CURRENT. WEDNESDAY, MAR. 8,

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. *at maker's works, or at usual ports of shipment in U.K. The price in different localities*

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9	&	8/3
,, Glacial .. .. ,,		35/-	
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	9
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	0	11½
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	0
Arsenic, white powdered .. .. nett per ton	16	12	6
Alum, loose lump .. .. ,,	4	5	0
Alumina Sulphate (pure) .. .. ,,	3	15	0
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¼ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2¾
,, = 24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	19	0	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	10	8	9
,, ,, (grey) Hull .. .. ,,	10	8	9
Aniline Oil (pure) .. .. per lb.	0	0	4¾
Aniline Salt ,, ... ,,	0	0	4¼
Antimony .. .. per ton	39	0	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	4	10	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	5	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizatine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30% A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	8
,, 50/90 ,, ... ,,	0	0	8
Carbolic Acid (crude 60°) .. .. ,,	0	1	11½
,, (crystallised 40°) .. .. .. per lb.	0	0	6¾
,, (liquid 95/97%) .. .. .. per gallon	0	1	0
Creosote (ordinary) .. .. ,,	0	0	3
,, (filtered for Lucigen light) .. .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	2	12	6
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	3	0
Solvent Naphtha, 90% at 160° .. .. per gallon	0	1	1
Copper .. .. per ton	69	15	0
,, Sulphate .. .. ,,	23	10	0
,, Oxide (copper scales) .. .. ,,	54	0	0
Glycerine (crude) 80% .. .. ,,	24	0	0
,, (distilled S.G. 1250°) .. .. ,,	48	10	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	2	6
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	15	2	6
,, Litharge Flake (ex ship) .. .. ,,	16	10	0
,, Acetate (white ,,) .. .. ,,	26	0	0
,, ,, (brown ,,) .. .. ,,	18	0	0
,, Carbonate (white lead) pure .. .. .. ,,	18	10	0
,, Nitrate .. .. ,,	22	10	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton			
,, ,, (grey) (ex ship) .. .. ,,			
Magnesium (ribbon and wire) .. .. per oz.			
,, Chloride (ex ship) .. .. per ton			
,, Carbonate .. .. per cwt.			
,, Calcined Magnesia .. .. per ton			
,, Sulphate (Epsom Salts) .. .. .. per ton			
Manganese, Sulphate .. .. ,,			
,, Borate .. .. per cwt.			
,, Ore, 70% .. .. per ton			
Methylated Spirit, 61° O.P .. .. per gallon			
Naphtha (Wood), Solvent .. .. ,,			
,, ,, Miscible, 60° O.P. .. .. .. ,,			
Oils:—			
Cotton-seed .. .. per ton			
Linseed .. .. ,,			
Stearine .. .. ,,			
Phosphorus (Yellow) .. .. per lb.			
,, (red) .. .. ,,			
Potassium Bichromate .. .. nett ,,			
,, Carbonate, 90% (ex ship) .. .. .. per ton			
,, Chlorate .. .. per lb.			
,, Cyanide, 98 % .. .. ,,			
,, Hydrate (Caustic Potash) 90 % .. .. per ton			
,, ,, ,, 75/80 % .. ,,			
,, Potash Hydrate Liquid 50 % .. .. ,,			
,, Nitrate (refined) .. .. ,,			
,, Permanganate .. .. per cwt.			
,, Prussiate Yellow .. .. per lb.			
,, Sulphate, 90 % (ex ship) .. .. .. per ton			
,, Muriate, 80 % ,, ... ,,			
Silver (metal) .. .. per oz.			
Sodium (metal) .. .. per lb.			
,, Carb. (refined Soda-ash) 48 % .. nett per ton			
,, ,, (Caustic Soda-ash) 48 % .. ,, ,,			
,, ,, (Carb. Soda-ash) 48 % .. ,, ,,			
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,,			
,, ,, (Soda Crystals) .. .. .. ,, ,,			
,, Acetate (ex-ship) .. .. ,,			
,, Arseniate, 45 % .. .. ,,			
,, Chlorate .. .. per lb.			
,, Borate (Borax) .. .. nett per ton			
,, Bichromate .. .. ,, per lb.			
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton			
,, ,, (74 % Caustic Soda) ,, ,, ,,			
,, ,, (70 % Caustic Soda) ,, ,, ,,			
,, ,, (60 % Caustic Soda) .. ,, ,,			
,, ,, (pure liquor 90° Tw.) .. ,, ,,			
,, ,, 77/78 % powdered (99 % hydrate) ,,			
,, Bicarbonate (cwt. kegs) .. .. ,,			
,, Hyposulphite .. .. ,,			
,, Manganate, 25 % .. .. ,,			
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.			
,, Nitrite, 98 % .. .. per ton			
,, Phosphate .. .. ,,			
,, Prussiate .. .. per lb.			
,, Silicate (glass) .. .. per ton			
,, ,, (liquid, 100° Tw.) .. .. .. ,,			
,, Stannate, 40 % .. .. per cwt			
,, Sulphate (Salt-cake) .. .. per ton			
,, ,, (Glauber's Salts .. .. .. ,,			
,, Sulphide .. .. ,,			
,, Sulphite .. .. ,,			
Strontium Hydrate, 100 % .. .. ,,			
Sulphocyanide Ammonium, 95 % .. .. .. per lb.			
,, Barium, 95 % .. .. ,,			
,, Potassium .. .. ,,			
Sulphur (Flowers) .. .. per ton			
,, (Roll Brimstone) .. .. ,,			
,, Brimstone: Best quality .. .. ,,			
Superphosphate of Lime (26 %) .. .. ,,			
Tallow .. .. ,,			
Tin Crystals .. .. per lb.			
,, English Ingots .. .. per ton			
Zinc (Spelter) .. .. ,,			
,, Chloride (solution, 100° Tw.) .. .. .. ,,			
,, Sulphate, Crystal .. .. ,,			

f.o.r. w'ks.

10 ton lots

THE

CHEMICAL TRADE JOURNAL

AND

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LATE ADVERTISEMENTS.

JUNIOR DRAUGHTSMAN Wanted (for Manchester), with Chemical knowledge and some experience of Chemical Works' construction.—Apply, stating experience and salary required, to "Draughtsman," c/o *Chemical Trade Journal* Office, Manchester.

CHEMICAL PLUMBER Wanted for American Fertilizer Works. Must be competent lead burner; sober, industrious, of good health. Middle-aged man preferred.—Full particulars of past experiences, with salary required, to Baldwin, 59, Mark-lane, London, E.C.

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THE GOVERNMENT AND THE FLASH POINT OF OIL.

AS we half expected Mr. Reckitt's Bill to raise the standard of safety to 100° F., Abel test, when discussed in the House of Commons, ended in a victory for the Government on the score of party politics, and a victory for the advocates of high-flash oil on the score of public safety and common sense.

We give elsewhere in this issue a digest of the debate, which, with one or two notable exceptions, showed how very little the speakers knew of the subject they were talking about; and also how extremely narrow-minded and personal are the majority of the worthies who deign to grace Parliament in order to further the public welfare. Several of the debaters evidently were convinced that the fact of Scotland producing a safe oil was an injustice to English consumers, and therefore preferred free trade in explosions and naphtha, rather than let a portion of the premium paid for safety go to North Britain. They did not perceive that this argument was a reflection on their own intelligence, but that mattered little. This inane argument has served the purpose of the low-flash clique on many a previous occasion, and it served it again.

Mr. Collings's feeble endeavour to place a hypercritical interpretation upon the wording of Mr. Reckitt's Bill displayed ingenuity, but it was misplaced. He objected to the statement that 73° F. was the temperature at which petroleum gave off inflammable vapour, because it did this even at zero. We knew this long ago, but what has it to do with the case since this vapour does not collect rapidly enough below 73° F. to flash when a light is applied. All Mr. Reckitt proposed was that in the interests of public safety this collecting point, at which the vapours can be fixed, should be advanced to 100° F. The point on which Mr. Collings sought to oppose the 100° standard is really a most potent argument in favour of adopting it. Possibly some dim perception of this was fogging his brain when he so lucidly explained to the House that "The flash point was reached when oil gave off a vapour so that when a light was applied it should give forth a flash." After this masterly example of perspicuous expression we do not wonder at a majority of 85. Of course Mr. Reckitt's supporters could only indulge in simple, common-place talk. It was a pity, however, that Mr. Reckitt did not there and then offer to substitute the words "flashable vapour" for "inflammable vapour," because it would still have left Mr. Collings to dispose of this fact. If the dangers of "inflammable" vapours were lurking in a barrel of oil or a lamp from zero to 73° F. (at which point they become "flashable"), how wise was Mr. Reckitt's proposal that they should be compelled to lurk until 100° F. was reached, since this temperature is hardly ever reached in rooms, lamps, barrels, or stoves containing petroleum, and 73° F. is a prevailing Summer temperature out of doors, and Winter one indoors?

Personally, however, we are glad this question has now

been removed from a political atmosphere. The public have safe oil at the same price as the unsafe, and it will not take long to educate users up to an appreciation of the existing circumstances.

As to the price bogey, it must be half-cousin to a cat, for it has had six lives already. A learned gas contemporary has just tried to give it another, but for the benefit of future enquirers after its health we beg to state that the funeral took place two years ago. For further particulars, kindly read its epitaph in the Blue Book containing the Petroleum Committee's proceedings, and the trade circulars of the American oil producers.

There are just two other points worth emphasising. The first is, that for a certainty, the price of American petroleum will soon go up, although the flash-point has *not* been raised. We might have had safe oil at the advanced price. Now we shall have to put up with the old semi-lubricating naphtha-slush compound—or else buy the safe Russian oil. The other point is that the Government can legislate, or Collings-late on lamps, or compromise by raising the flash-point to 85° F., as is suggested, or do what it likes, but no oil must be used for illuminating purposes in barracks or Government buildings which is not precisely the same in regard to both flash-point and preparation as that sold to, and used by, the public for illuminating purposes. We specify "preparation" or additional treatment purposely. There are several Government advisers who will understand why.

IMPORTS AND EXPORTS FOR FEBRUARY.

THE Board of Trade returns for the past month are satisfactory, generally, and are also a little more encouraging from a Chemical standpoint. The *imports* of chemicals and oils showed increases, large receipts of indigo having helped the chemicals up. The *exports* of chemicals, saving alkali and salt, were higher in value, notably copper sulphate.

IMPORTS OF FOREIGN AND COLONIAL PRODUCE

Articles.	Quantities. 1898.	1899.
Copper Ore and Regulus.....Tons	9 051	5,283
Pyrites.... ..... ,,	48,482	50,820
Tin ..... Cwt.	38,646	46,885
Alkali ..... ,,	14,154	10,452
Brimstone ..... ,,	25,050	25,813
Dyes, Coal Tar ..... £.	57,524	51,067
Saltpetre ..... Cwt.	10,220	18,747
Petroleum ..... Gall.	23,804,310	18,835,549
Turpentine ..... Cwt.	3,996	42,796
Guano.....Tons.	2,105	1,431
Nitrate of Soda ..... ,,	6,139	7,240
Paraffin Wax..... Cwt.	97,256	87,469
Rosin .... ,,	109,837	92,566
Tallow and Stearine..... ,,	89,119	136,020
Tar ..... Barrels	3,537	3,178
Oil Seed Cake ..... Tons	34,227	44,384
Wood Pulp..... ,,	27,982	30,123
Borax .....Cwt.	1,111	287

EXPORTS OF BRITISH AND IRISH MANUFACTURES.

Articles.	Quantities. 1898.	1899.
Alkali .... Cwt.	284,113	251,609
Cement .....Tons.	27,904	21,010
Coal and Coke ..... ,,	2,518,751	3,196,848
Copper, all kinds .....Cwt.	57,292	96,057
Iron and Steel .....Tons.	230,468	224,257
Chemical Manures ..... ,,	31,115	31,119
Oils, seed ..... ,,	4,036	2,922
Salt ..... ,,	57,899	44,404

STOWING OILED MATERIALS ON SHIPS.

THE Board of Trade has issued the following notice :—The attention of the Board of Trade has been called to the danger arising from materials which have been dressed or soaked with oils, either raw or boiled, such as oiled clothing, oiled silk or cotton goods, and oiled paper, &c., whether in the piece or used for packing purposes. The Board have reason to believe that materials which have been so treated are liable to spontaneous combustion, more especially in newly manufactured goods that have been insufficiently dried. The Board of Trade think it desirable to inform all persons interested that it is very important that cases containing oiled goods intended for exportation as merchandise should be perforated or otherwise ventilated, and should be distinctly marked at full length in English, as required by section 446 of the Merchant Shipping Act, 1894. When oiled materials are used for packing purposes, great care should be exercised that they have first been properly dried, and also that the various folds do not overlap to such extent as to bring several thicknesses of the material together. On board ship, when oiled goods are carried under deck, care should be taken that they are stowed in a cool place, and in such a position that they can be readily got at. The Board of Trade are aware that it is the practice of some manufacturers to pack oiled clothing in hermetically sealed metal-lined cases with the object of excluding air from the goods. If the soldering is carefully attended to, this precaution is considered to effectually protect the contents from spontaneous combustion, but goods so treated should have been seasoned for a full month after manufacture.

SOLUBILITY OF SULPHIDES IN GLASS.

AS is well known, sulphides of the heavy metals, and especially cadmium sulphide, are dissolved unaltered by melted glass, which fact enables one to obtain a number of colouring substances for glass. In the production of glass coloured with cadmium sulphide, certain difficulties had formerly to be surmounted, but now fancy glass, coloured with cadmium sulphide, is manufactured on a large scale, which is distinguished from the brownish-yellow silver glass by its brilliant deep yellow colour, with a faint tinge of green. This leads to the idea of using other sulphides, and with a view to effecting their solubility, the following mixtures are suggested :—

1. Sand, 65 decigrams ; potash, 15 decigrams ; soda, 5 decigrams ; lime, 9 decigrams ; molybdenum glance, 3 decigrams ; sodium sulphide, 2 decigrams. From this results a handsome, dark red-brown, ruby colour. In thin layers the glass appears light brown-yellow ; flashed on opal it turns a dirty black-brown, which appearance is, by the way, also observed with other sulphides, and may be traced back to the fact that the sulphides precipitate from the rather concentrated solution on repeated heating.

2. Sand, 50 decigrams ; potash, 15 decigrams ; soda, 5 decigrams ; lime, 9 decigrams ; molybdenum glance, 1 decigram ; sodium sulphide, 2 decigrams. This gives a yellow which strongly tarnishes glass.

3. Sand, 10 parts ; potash, 3·3 parts ; soda, 0·27 part ; lime, 1·64 parts ; molybdenum glance, 0·03 part. This gives a reddish-yellow glass with a very handsome tinge of red.

4. Sand, 100 parts ; potash, 26 parts ; soda, 1·8 parts ; lime, 12 parts ; cupric sulphide, 1·7 parts ; sodium sulphide, 1·3 parts. This yields a sepia to sienna coloured glass, dark brown, no longer transparent in a tolerably thick layer, but clear and undimmed. By heating, it turns dirty dark brown and dim ; thinned with cutting glass and flashed on opal, agreeably warm sepia shades are produced, obtainable in any desired intensity, and which are especially suited as a background for designs or glass painting.

Experience has shown, however, that glass coloured with sulphides is not so easy of production as that coloured with silicates.

This is for the most part owing to the ease with which the sulphides are oxidised, their comparatively greater volatility, and to the fact that metallic sulphides are entirely different from the substance of glass and cannot therefore, be melted together with it in any desired quantity.—*Diamant.*

An Oil Refinery on Fire.—An outbreak of fire took place on Wednesday morning on the premises of Messrs. John Rigby and Son, oil refiners, etc., Comus-street, Regent-road, Salford. The borough brigade, immediately on receipt of information, proceeded to the place, but the chief officer, Mr. Bentley, soon found that there was little hope of saving the premises. The building was of two storeys, and about 80 yards long by 30 yards wide. At the time of the outbreak it was largely stocked with oil, tallow and other inflammable articles. The whole of the contents of the building were destroyed, and very little of the building itself remained standing. The damage is large, and is understood to be partly covered by insurance.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Improvements in Filters. F. R. Lipscombe. 4,340. February 27.
Improvements in Manures. J. Crone, D. C. Taylor, and F. Williams. 4,362. February 28.
Filtering Apparatus for Sewage. J. Wilson and A. Reid. 4,430. Feb. 28.
Filters for Sewage. C. J. Whittaker. 4,460. March 1.
Improved Process for Tanning. J. H. Curling and Curling's Tannery, Ltd. 4,490. March 1.
Manufacture of Water Gas. A. J. Boult. 4,495. March 1.
Extracting Metals from Ores. E. Bohon. 4,504. March 1.
Manufacture of Explosives. G. Beneke. 4 507. March 1.
Producing Fish Oil. E. O. G. Schuseil. 4 594. March 2
Purifying Hydrochloric Acid. S. J. Boulouvard. 4,609. March 2.
Manufacture of Nitric, Nitrous, and Sulphuric Acids, and Oxides of Nitrogen. A. McDougall. 4,643. March 2.
Apparatus for Clarifying Oil. H. Beckmann. 4,703. March 3.
Apparatus for Use in the Manufacture of Gelatine. J. H. Annandale. 4,755. March 4.
Treating Sewage and Town's Refuse. T. H. Tyson and C. W. Laycock. 4,763. March 4.
Manufacture of Portland Cement. L. White. 4,813. March 4.
Manufacture of Portland Cement. L. White. 4,814. March 4.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improved Process of, and Apparatus for Obtaining Amorphous Carbonate of Lime from Caustic Soda or Caustic Potash Residues, and for Obtaining Sulphate of Lime from such Residues. H. E. Sturcke, 284, Pearl-street, New York, and W. F. Jobbins, of Aurora, Illinois, U.S.A. Eng. Pat. 6,987. March 21, 1898.

The lime residue left from causticising a solution of an alkaline carbonate is mixed into a cream with water. The insoluble impurities, such as sand, etc, are removed by levigation and screening. Any caustic lime present is then carbonated by treating with carbon dioxide or removed by another suitable acid. When the amount of caustic lime is small it is dissolved by the large quantity of water used to make the thin milk of calcium carbonate, and any further treatment is unnecessary. This thin milk is jigged and levigated until it will pass a screen with 200 meshes to the square inch. It is claimed that the carbonate of lime so obtained is a new commercial product composed of amorphous particles of microscopical fineness, quite devoid of crystalline structure. When dried at 212° F. the specific weight ranges from 78 to 94 grms. per 100 cc. If dried at a higher temperature the specific weight is higher. When powdered it does not form aggregates or balls, but will pass a 100 mesh sieve. It can be used for preparing sulphite and bisulphite of lime, etc. The sulphate is obtained from it by decomposing with sulphuric acid. Sulphate of lime may also be obtained direct from the sludge from the causticisers by dissolving in hydrochloric acid and decomposing the calcium chloride with vitriol. The hydrochloric acid which is re-formed is used again, but in practical working there is a loss of about 10 per cent, which has to be made up. There are five figures illustrative of the plant which is used for these several processes.

Improvements in Process and Apparatus for Drying Industrial Vegetable and Chemical Wastes. E. Löwi, Graz, Austria. Eng. Pat. 24,628. November 22, 1898.

The apparatus is essentially intended for treating the waste from beet sugar factories. The beet chips and liquid waste are run hot on to a filter, the filter bed being kept hot by steam pipes. The filtration process is assisted by forming a vacuum on the under side of the filter bed. The solid portion is then passed through a series of enclosed troughs in which a cluster of steam pipes rotates. There are eleven drawings, the invention being entirely of a mechanical nature.

Improved Means for the Production of White Lead. E. Bailey, Burton-lane; G. R. Cox, Beech Villa, Holgate; and W. T. Hey, Low Ousegate, all of York. Eng. Pat. 7,877. April 2, 1898.

A bath of lead is maintained in a molten state, by a suitable furnace, in an enclosed iron pot, which forms the positive pole in an electric circuit. The negative pole is a hollow block of carbon supported just above the surface of the molten lead. Through the hollow centre of the carbon a mixture of steam, carbon dioxide, and acetic acid vapour is introduced. On passing the electric current an arc is formed between the carbon pole and the molten lead, thus volatilising the lead, which combines with the gases present to form white lead. The latter is drawn off and deposited in a series of flannel collecting bags. There is one figure.

Improvements in the Treatment of Sewage. F. M. and D. D. Spence, both of the Manchester Alum Works, Manchester. Eng. Pat. 3,450. February 11, 1898.

Sewage is treated with aluminoferric and vitriol in suitable proportions to precipitate the putrescible and fatty matters, and exactly neutralize the sewage. From 10 to 20 cwt. of aluminoferric and 12 to 18 cwt. of 140° Tw. vitriol are generally suitable quantities for ordinary sewages, but the precise amounts will, of course, vary according to the impurity and alkalinity of every sewage. The sludge is pressed, dried, and extracted with a volatile solvent to recover the fats. After removing the excess of solvent, the sludge form as phosphatic and nitrogenous fertilizer, from which manurially injurious constituents have been removed.

Improvements in the Manufacture of Nitro-phosphates. H. H. Lake, 45, Southampton Buildings, London, W.C. (Communicated by La Soc. Coignet et Cie., 114, Boulevard Magenta, Paris.) Eng. Pat. 5,009. March 1, 1898.

Nitric acid is substituted for vitriol in the manufacture of superphosphates, with the formation of nitrate of lime, which is of manurial value apart from the phosphate present. The liquid paste obtained by dissolving the mineral phosphate in nitric acid is rendered pulverulent by the addition of plaster or calcium sulphate. This end may be assisted by direct heat, but there is a risk of losing nitric acid. Another method is to use a mixture of nitric and sulphuric acid to dissolve the phosphate. Calcium sulphate is formed *in situ*, and a dry product is obtained direct. This mixture is not quite so active as the nitro-phosphate alone, but it can be produced more cheaply.

Improvements in the Manufacture of Soap. L. Grote, 84 B, East India Dock-road, Poplar, London, E. Eng. Pat. 4,577 February 24, 1898.

The preparation of a "cold process" soap is described thus:—There are three stages in the process. First, cane sugar syrup is mixed with twice its bulk of water and left in a warm place to ferment. The second step consists in mixing potato flour and a solution of sodium silicate of 40° Bé. in the fermented sugar solution. Half of the resulting product is mixed with a 40° Bé solution of caustic soda, cocoa nut or other oil being added when the solution begins to warm and thicken. Finally, the remaining half of the sugar-flour-silicate composition is thoroughly incorporated and the soap framed.

GOLD OUTPUT IN THE RAND.

THE output from the Witwatersrand district during the past month (in bullion ounces), as cabled by the Chamber of Mines of the South African Republic, amounts to 404,335 oz., as against 410,145 oz. for January, and 297,975 oz for the corresponding month of 1898. From the outside districts 20,831 oz. are reported, as against 20,865 oz. for January, and 23,263 oz. for the corresponding month last year. The total return, therefore, made to the Chamber amounts to 425,166 oz., as compared with 431,010 oz. for the previous month, a decrease of 5,844 oz. The following are the monthly returns from the Rand district alone since the beginning of 1895:—

	1895.	1896.	1897.	1898.	1899.
	oz.	oz.	oz	oz.	oz
January	177,463	148,178	209,832	313,826	410,145
February	169,295	167,018	211,000	297,975	404,335
March	184,945	173,952	232,067	325,907	—
April	186,323	176,707	235,698	335,125	—
May	194,580	195,008	248,305	344,160	—
June	200,941	193,640	251,529	344,670	—
July	199,453	203,873	242,479	359,343	—
August	203,573	213,418	259,603	376,911	—
September	194,764	202,561	262,150	384,080	—
October	192,652	199,889	274,175	400,791	—
November	195,218	201,113	297,124	393,310	—
December	178,428	206,517	310,712	419,504	—
Total	2,277,635	2,281,874	3,034,674	4,295,602	814,480

SOUTH AMERICAN MANGANESE.—A cargo of manganese brought from South America has recently arrived in Liverpool. This is the first time that any such cargo has ever been brought from the country named, and it is understood that extensive beds are available in South America. The cargo on this occasion was consigned to Messrs. G. G. Blackwell, Sons, and Co., of Liverpool.

Reports of Companies.

ROBURITE EXPLOSIVES, LTD.

The report of the directors for the year ended December 31st last states that, after providing for all necessary charges, the net profits of the year are £5,264., which, added to the balance brought forward from 1897, gives a total of £5,339. for appropriation. Under the articles of association 10 per cent. of this amount has been set aside for reserve fund, leaving a balance of £4,805., out of which an interim dividend, paid in September last, absorbed £2,326. There is thus a sum of £2,478. now available for distribution, and the directors recommend the payment of a further dividend on the preference shares to discharge the arrears of cumulative dividend for the six months ended June 30th, 1896. This will require £2,454., and will leave £24. to be carried forward. The position and prospects of the company have distinctly improved. The Home Secretary's order, under the Coal Mines Regulation Act of 1896, has, as was anticipated, given an impetus to the demand for safety explosives, and the company has been able to satisfy the requirements both of the Government and of consumers with its two specialities – roburite and amvis—which are second to none in the market for safety, cheapness, and efficiency. Under these conditions the volume of business has steadily expanded during the year, and the directors see no reason to doubt the continuance of this expansion, the sales since January 1st being considerably in excess of those for the corresponding period of 1898.

HERMAND OIL CO., LTD.

An extraordinary general meeting of the shareholders of the Hermand Oil Company (Limited), was held recently in Lyon and Turnbull's rooms, George-street, Edinburgh—Mr. D. Stewart, Glasgow, chairman of the board of directors, presiding. The Chairman said the meeting had been called to confirm the resolution passed at the meeting of the company held on 21st ult, and he moved accordingly. Mr. D. Chalmers, Bonnington, Leith, seconded the motion, which was unanimously agreed to. The new company, it is understood, will be incorporated within the next few days under the name of the New Hermand Oil Company.

GERARD BROS., LTD.

The second annual meeting of the shareholders of Gerard Brothers, Limited, soap manufacturers, Basford, was held on Wednesday, the 1st inst., at the George Hotel, George-street, Nottingham. Mr. T. B. Gerard (chairman of directors) presided, and he was supported by Messrs. T. A. Gerard and J. B. Gerard (directors), there being a good attendance of shareholders. The Chairman said they had had a satisfactory year, and were established on a sound business basis. They were bent upon preserving this condition and improving it in every way, but intended paying such dividend only as had been fairly earned. They recommended a dividend of six per cent. for the year and they were carrying forward a fair balance. The turnover had been substantially increased, though the expenses had been somewhat heavier, notably in working new ground, which promised to turn out much more profitable in the near future. The plant was in excellent working order, and they were turning out all classes of soap. The report and balance sheet were adopted. The retiring director, Mr. J. B. Gerard, was re-elected, and Messrs. Derbyshire Brothers also re-elected accountants to the Company. The meeting terminated with a unanimous vote of thanks to the chairman.

DIVIDEND.

Anglo-Sicilian Sulphur Company, Ltd.—An interim dividend on the preference shares at the rate of 6 per cent. per annum (calculated on the amount per share paid up) for the half-year ended January 31st will be payable on the 29th inst.

Sulphur in Southern Spain.—In a paper read before the Institution of Mining Engineers, Mr. Arthur P. Wilson has given a useful description of the sulphur mines of the Sierra Gador, which are typical of the series met with through a belt of country extending north-east from Gador, in the province of Almeria, to the town of Lorca, in the South of Spain. Generally the sulphur occurs in an opaque form, cystals of translucent sulphur being only occasionally found. It was calculated in 1893 that there remained 700,000 tons in the sulphur-bearing zone at Gador, though Mr. Wilson would not rely upon a larger amount than 400,000 tons being then *in situ*. No uniform method of working has been followed, and the extraction was until recently carried on by boys carrying the mineral up steep gradients under ground. Dome-shaped furnaces are used for dealing with the raw ore, the operation occupying about a fortnight, and the annual production being about 4,500 tons of merchantable sulphur, at a cost of £1. 18s. 7d. per ton f.o.b. at Almeria.

UTILISING "BROWN" COAL AND PEAT.

THF British Consul at Düsseldorf (Mr. T. R. Mulvany), citing a report by Dr. Niessen, says :—

Rhenish brown coal mining has become a factor in Rhenish industrial life which will henceforth have to be reckoned with. Realising the economical advantages offered in the Cologne district by it, several large manufacturers, more especially those of sugar, of chemicals, of earthenware, pipes, etc., have adopted it as fuel, some adapting their furnaces thereto, others constructing them from the first, to suit the coal. In the circles interested, a greatly increased prosperity is anticipated in brown coal mining and in the manufacture of briquettes connected with it, but more particularly of the large industries in the Cologne district generally. In Cologne and its neighbourhood alone there are, not to speak of other factory furnaces, more than 2,500 large and small steam boilers which could with advantage be altered for the consumption of brown coal, and by its use save, in proportion to the distance from the mines, more than the entire freight, compared with the cost of bituminous mineral coal. With the relatively low price at which brown coal can be got from the pit, motor energy as well as heating power can by its use be obtained within the district, in the neighbourhood of the pit, at as small a cost as anywhere else on the Continent, at a smaller one even than in the Ruhr coal district.

The heating power of brown coal is reckoned at one-third that of medium quality mineral coal, whilst the latter costs at the pit at present about 8 to 9 marks per ton, the highest price of the unpressed brown coal at the pit is 2 marks per ton, and in considerable quantities 1 mark 80 pf. per ton, *i.e.*, about 1s. 10d. to 2s. At such prices, and with means of transport by railway to the Rhine, there would seem to be no reason why the briquettes could not be exported in light draught sailing craft direct to British seaports. He adds that it would then, however, appear advisable that British capital should be invested in the extraction and transport of this cheap fuel. Already it is being exported from the Rhineland to Switzerland, the Netherlands, and Italy.

The quantity of brown coal, about 3,000 million tons, contained within the limited district of the Vorgebirge (or lower range) affords moreover a guarantee of continued moderate prices, so that an extraordinary industrial development within the district in question may reasonably be expected, and no more suitable locality for the erection of works requiring large quantities of fuel could be named than this same brown coal district, expecially as, within a short time, it will be connected by light railways with Germany's most important waterway, the Rhine. In addition to this there exist large, valuable deposits of clay for manufacturing purposes, and moreover in this district wages are low. As a matter of fact, new works, pottery factories, glass factories, linoleum works are continually springing up The last two years were of pre-eminent importance in the development of mining operations, and the latter deserves, therefore, special notice among the commercial factors of recent times.

The brown coal of the Rhineland district is in its chemical composition far superior to that of other districts, for instance, the coal of Grube Bleibtreu when dried at 100°C. shows the following composition :—

	Per Cent.
Carbon	66 38
Hydrogen	5·54
Oxygen and nitrogen	23·55
Ashes	4·53
Total	100·00

The coal of Grube Brühl after being dried in the open air showed the following composition :—

	Per Cent.
Carbon	53·50
Hydrogen	3·90
Oxygen and nitrogen	20·09
Ashes	4·66
Water	17·85
Total	100·00
Combustible substances	77·49

In conclusion Mr. Mulvany suggests that something might be learned from German industry in dealing with this fuel, inferior though it is when compared to the much older formations of the so-called mineral coal, in studying the best means of making money out of the vast peat turf bogs in Ireland, by pressing that spongy, soft material into briquettes for transport throughout the country. There are, he says, doubtless greater difficulties to be contended with in pressing peat than lignite, owing to the former not being so glutinous or adhesive as the latter, but in view of the great advances made in the applied science of chemistry and engineering, the thing could, he thinks, be done with commercial success.

Parliamentary Jottings.

THE MANUFACTURE AND USE OF WATER GAS.

In the House of Commons last week Mr. Ascroft (Oldham) asked the Secretary of State for the Home Department, whether his attention had been called to the report of the Departmental Committee appointed to inquire into the manufacture and use of water gas and other gases containing a large proportion of carbonic oxide, and to the dangers that were likely to arise to the public safety unless restrictions were placed upon the manufacture, as recommended by such committee; and whether it was the intention of the Government to introduce a Bill dealing with the question.

Mr. Collings (Birmingham, Bordesley), who replied to the question, said,—The report of the Departmental Committee was made to the Secretary of State, and was by him laid upon the table of the House. He is now consulting his colleagues the Presidents of the Board of Trade and of the Local Government Board, who were represented on the committee, as to the recommendations; but it has not yet been decided what action should be taken.

CARBOLIC ACID AND ITS SALE.

On Monday, in reply to Dr. Farquharson, Mr. J. Collings said the Home Secretary understood that the Privy Council, while not thinking it expedient to include carbolic acid in the schedule of the Pharmacy Act, were of opinion that regulations should be made in regard to its sale, and they had prepared a Bill for that purpose. It was, however, impossible to say whether the state of public business would permit of the Bill being introduced this session.

THE FLASH-POINT OF PETROLEUM.

On Wednesday, Mr. H. Reckitt moved the second reading of his Bill to raise the Government standard of safety from 73° F. to 100° F. The debate was long, and mainly characterised by the "scrappiness" of the knowledge displayed by the objectors.

The supporters of the Bill asked, over and over again, if the lives of poor people were to be sacrificed to prop up American monopolies. And this reiteration caused Mr. R. G. Webster to deprecate the alienation of the United States just when we are beginning to understand and like one another. This argument, which amounted in itself to a plea for human sacrifice to a sort of Minotaur, amused the House mightily rather at Mr. Webster's expense, and Mr. Reckitt really appeared as quite a Theseus. But Mr. Tully was the first to win the House wholly from dreariness by the recital of the accidents caused by low-flashing oil. The most considerable effort in the debate was the speech of Mr. Alexander Ure. It was compehensive, historical, cutting, technical, and displayed many of the best and plainest qualities of the Scotch mind. This was the sort of speech that draws a vote out of one lobby and assigns it to another. This would probably have happened—Mr. Ure might have felt that he had influenced the voting—if the issue had been left for men to decide as they pleased.

But Mr. Collings, instead of compromising on the Bill as many had expected, gave the Government supporters no uncertain instructions how to vote. He plainly told them that the Government disapproved of the Bill. When he tried to define "flash-point," and indeed when he tried to be quite precise on any matter at all, Mr. Collings floundered in a way that the House found vastly entertaining. On both sides of the House members shouted with laughter, with all the rudeness which appears to be legitimate in debate and which the House of Commons is capable of in the mass. One argument was that the Petroleum Committee had made many recommendations which were carried by great majorities, but that Mr. Reckitt's Bill contained (and contained nothing else) but the one recommendation which had been carried by a bare majority. Mr. Collings quoted the cases of other countries and American States in which the flash-point was allowed to be far lower than 100, and declared that the question was too multifarious to be dealt with in a single-clause Bill. The Government, he said, however, quite defiantly propose to introduce a Bill based on the recommendation of the Petroleum Committee. Thus after pledging himself quite recently to place the public safety first and foremost, Mr. Collings turned the matter into a purely political point, with the result that in the division on Mr. Reckitt's Bill, 244 voted against it and 159 for it, giving a majority of 85 against.

The Sulphide Reduction Co.—The Sulphide Reduction Company is stated to have had some very interesting and valuable results from the treatment of refractory ores at Llanelly. The works of the French company are now completed, and will be started shortly. *Midas* in his notes on "Round the House," vouches for the following:—*Broker:* Good morning! What price Sulphide Reduction? *Jobber:* 2¾-2¼. *Broker:* Great Scott! Why, I gave 3¾ for some yesterday. *Jobber:* Ah! that *is* the reduction.

SECRET COMMISSIONS IN TRADE.

REPORT OF THE COMMITTEE.

THE report of the committee appointed by the London Chamber of Commerce to consider this subject has just been issued.

The committee conclude from the evidence before them that secret commissions in various forms are prevalent in almost all trades and professions to a great extent, and that in some trades the practice has increased, and is increasing; and they are of opinion that the practice is producing great evil, alike to the morals of the commercial community and to the profits of honest traders.

Bribes in all forms, including secret commissions, owe their existence sometimes to the desire of the donor to obtain the assistance of the donee; sometimes to the demand expressed or implied of the donee that the bribe shall be given.

The bribes given naturally take many forms; most generally they are given in the simple form of money payment, the worst form of which is a *pro rata* commission on the business done; sometimes in the shape of a loan, which places the borrower at the absolute mercy of the lender, who, if he be dissatisfied with the amount of custom he receives, can call in, or threaten to call in, the loan; sometimes the bribe consists of presents of plate, wine, or other things, and not infrequently it is administered in the form of lavish hospitality and treating.

One frequent practice with those who venture to put their offer of bribes on paper is to describe the sum offered as a "discount," though the offer is made, of course, not to the principal but to his agent.

The mass of corruption which the evidence before the committee shows to exist may appear to some persons so great and complex as to render it hopeless to struggle towards purity. The committee do not take this view of the matter. They believe that the discussion of the subject and the publicity of some cases before the Law Courts have already done some good; and they recall the undoubted fact that corruption formerly existed in this country in regions where it is now entirely unknown; that there were cases in past times in which bribery threw a stain upon occupants of the Bench; that at one time a large number of the members of the House of Commons were in the pay of the Crown; and that commissions and other secret forms of bribery abounded in Government departments. The committee accept the improvement which has taken place in these directions in the last fifty years as a fact full of encouragement for the commercial community of Great Britain.

If legislation is to be attempted it appears to the committee that it should render criminal the payment, the receipt, the offering, and the solicitation of any corrupt payment; and also the giving of any invoice or other document calculated to enable the recipient to commit a fraud upon his principal, and that it is expedient that such legislation should be initiated by the Chamber or supported by a petition by them.

The committee submit that the question of the desirability of legislation should be fully and immediately considered by the Chamber, and that if an affirmative conclusion be arrived at the matter should be remitted to a committee for the preparation of a suitable Bill, with such assistance as they may think proper to invite.

But meanwhile, and independently of legislation, it appears to the committee that much may be done if only the community will rouse themselves to the task, and with this view the committee make the following suggestions:—

The more frequent enforcement of the civil rights of the principal; and they are advised that these rights may be thus stated:—

(*a*) A master or principal may recover from his servant or agent everything which has been received by him by way of secret commissions in the course of his service or agency, and if the accounts have been settled between the principal and his agent, and it can be shown in a single instance that the accounts are tainted with fraud or wilful omission, the accounts may be reopened, and the agent be required to restate and verify them by oath.

(*b*) A master or principal may as a general rule dismiss without notice, or without payment in lieu of notice, any servant or agent who has received and not disclosed a bribe.

(*c*) A contracting party may repudiate and rescind any contract entered into through an agent who has received a bribe from the other side.

(*d*) A contracting party may recover from the briber, and the bribed, or either of them, any sum which he has paid under the contract, and which in consequence of the bribe was in excess of the fair or market price

(*e*) A contracting party whose agent has been bribed by the other party during the execution of the contract may, in spite of its being part performed, rescind and recover what he paid, both to the briber and the bribed.

FURTHER SUGGESTIONS.

The committee further suggest:—That all professional and trade bodies (such as those representing the medical, legal, artistic, and other

professions and trades), be recommended to make an emphatic declaration on the subject of secret commissions, and adopt the course already taken by the Royal Institute of British Architects, the Institution of Civil Engineers, and other bodies, by inserting into their bye laws a stipulation that any member guilty of the pernicious practice will be expelled the society by the council. In order to make such a provision effective this would require the aid of the general public, as well as of the members of the several professions and trades.

That traders should make with all with whom they deal a definite agreement, similar to that entered into by the members of the Calico Printers' Association, undertaking that nothing in the form of a bribe, commission, or present shall be offered or given by them to anyone.

It would be highly advantageous if masters and principals, when entering into engagements with servants and agents, would call attention to the subject, and make the refusal of all bribes an express, instead of an implied term of the contract of service or agency. Such an explicit stipulation would probably give moral as well as legal support to servants and agents in resisting the temptation when offered under the pretence of a thing which is always done.

Something may be done to check commissions by the exercise of increased vigilance on the actions and proceedings of the servants and agents employed, especially of buyers and salesmen and of persons employed to inspect and pass goods. If principals would always inquire for themselves why goods were refused, or why advice is given hostile to the particular manufacturers or tradesmen, they would sometimes find that the defect was not in the goods but in the bribe. This necessity for vigilance applies with special force to the case of large institutions, such as workhouses, hospitals, asylums, and to large commercial joint-stock concerns, such as railways, and to co-operative stores.

INSUFFICIENT SALARIES.

In many cases buyers and others who are employed in very responsible positions, and have very important duties to perform, are paid inadequate salaries, and are thus rendered especially liable to the temptation of accepting bribes. This, in our opinion, demands the careful consideration of the heads of firms.

The existence of a great system of technical education throughout the country should be utilised as a means of disseminating clearer views than often exist of the immorality of the giving and receiving of bribes. The managers of these institutions would no doubt give the necessary permission and allow influence in the right direction to be brought home to the young people in their schools, whether by means of written papers or of oral addresses.

Lastly, the committee recommend the holding of a public meeting to call the attention of the public and all concerned to the heinousness of the system of secret commissions and its detrimental effect upon morals and business.

SOME EXAMPLES OF BRIBERY.

A gentleman, thoroughly conversant with the lubricating oil trade in Lancashire and Yorkshire, stated :—"In regard to cylinder oils, the engineer-stokers at mills have been so generally educated by oil sellers and agents that they almost all expect an allowance of some sort on oil used. If not forthcoming, complaints are handed in of inferior body or grit, and so forth. The amount of the allowance varies, but it is mostly now about 3d. per gallon, or 10s on a 40-gallon barrel ; 7s. 6d. used to be the maximum. The modes of payment differ ; sometimes the money is handed over by the agent when meeting, or it is paid in bulk at wake time and new year; but the most finished plan is to remit by postal order to the man's private address, of course without clue to the sender."

A woollen cloth manufacturer and dyer wrote :—"I saw at once that unless I bribed the dyers I could do little or nothing. Dyers simply take the one they are paid secretly the most to use. Dyers, I hear, have 3d. per bag (1 cwt.) off logwood. Anyone who omits this cannot sell logwood. I know two honest men driven out of the trade. The Germans are the worst bribers. I had several vats I was trying for manufacturers deliberately spoilt because I would not bribe the men."

A Yorkshire woollen manufacturer wrote, stating : "One of the greatest evils in the textile trade is the bribing of dyers and drysalters. It so permeates the trade that we cannot stop it. Dyes which are worse than useless are palmed off upon the manufacturer."

There is an enormous amount of bribery in the oil trade. In Newcastle the colliery viewers come to town every Saturday with their orders in their pockets, which they give to those who treat them best. Coal merchants also make a payment of three halfpence a ton or more for furnace coal. In the soap and perfumery, mineral water, and confectionery trades hardly any business worth speaking of is transacted unless bribes are paid.

A number of examples are also given of bribery in the professions. In some cases architects, engineers, and lawyers accept a fee in addition to their professional charges. Auctioneers are frequently offered business if they will give a third of the commission. Secret commissions are given by chemists to medical men on their prescriptions supplied to patients, in some cases amounting from twenty-five to fifty *per cent. on the* price charged by the dispensing chemist.

RAPID ESTIMATION OF NITROGEN BY KJELDAHL'S METHOD.

[SPECIALLY CONTRIBUTED.]

TAKE 1·7 grm. of the fertiliser (free from nitric nitrogen), place in a 6 oz. flask, add 10 cc. strong H_2SO_4, and heat until boiling. Whilst boiling add 10 grms. powdered K_2SO_4 in small quantities at a time. Boil strongly, and the contents of the flask will quickly become colourless or nearly so. Allow to cool somewhat, and cautiously add cold water until the flask is about half full. Transfer to the distillation flask (a 32 oz. Jena flask is very good), rinse out with boiling water, making the contents of the Jena to about 400 cc. Add NaOH solution in excess, and distil into 4 to 30 cc. Normal H_2SO_4 (according to the content of N) diluted to about 200 cc. in a flask. Boil for ten minutes, disconnect, cool, and titrate distillate with $\frac{N}{4}$ NaOH. Subtract the titration figure from the quantity equivalent to the Normal H_2SO_4 used, and divide by 4, which gives percentage of NH_3. About six determinations can be made in two hours, using the same distillation flask.

The accompanying illustration indicates the apparatus used, in connection with which the following points are worth noticing :—

1. The distilling flask is a 32 oz. Jena flask.
2. The receiving flask contains N. H_2SO_4 diluted to about 200 cc., which is not cooled, as, even when the acid remaining unneutralised amounts to only 0·5 to 1·0 cc., there is no loss of NH_3 whatever. Furthermore, the danger of forming an alkaline layer, as mentioned in a former article in the *Journal*, is entirely obviated (*C. T. J.*, 612, page 108).
3. The connecting tube is entirely of glass.
4. The bulbed tube prevents any expulsion of acid.

TRUSTS IN THE UNITED STATES.—Trusts seem to increase in the States, and if the present rate is maintained the amalgamations of this year will be greater than the combined lists of several previous years, both in number and amount of capital. Among the latest trusts to be organised are the American Silk Thread Company, with a capital of $12,000,000, which will control the entire output of silk thread ; a Fertiliser Trust, of Boston, with $35,000,000 ; the National Salt Trust Company, with a capital of $10,000,000, which has absorbed all the salt companies in the country ; and a Virginia Coke Combination, which embraces 29 companies. In addition to this partial list, there is the case of the National Steel Company, which has increased its capital to $57,000,000.

BORAX COMPANY, LIMITED.

BEFORE Mr. Justice North, this week, Mr. Vernon Smith, Q.C., moved, in the action of Foster *v.* the Borax Company, Limited, for an injunction to restrain the company from selling, conveying, or parting with the whole or any part of the assets and property of the company, and for the appointment of a receiver and manager. Counsel stated that the Borax Company was formed in November, 1887, with a capital of £1,000,000., divided into 100,000 shares of £10. each, which was afterwards reduced to £250,000. The company also issued debentures to the extent of £295,200., carrying interest at 6 per cent. On June 22, 1898, there was a resolution to voluntarily wind up, in order to carry into effect an arrangement with the debenture holders, and in July of the same year an order was made sanctioning the scheme under which the present debentures stood. On November 28th an agreement was entered into between the company and Mr. Defries for the sale to the Borax Consolidated. The proposed purchase was to be made as and from October 1, 1898, the purchase consideration being £320,000, payable as to £100,000 either in cash or debentures, at the option of the purchasing company, £150,000. either in cash or cumulative preference shares, at the option of the purchasing company, and the balance of £70,000. by the allotment of ordinary shares; so that the whole of the assets of the company were going over on the basis that the purchasers were at liberty to pay the whole consideration in debentures, preference, or ordinary shares. The plaintiff submitted that if this arrangement was carried out the company would cease to carry on business, and that therefore the security had become enforceable. He contended that the arrangement was illegal, and would be prejudicial to his interests as a debenture-holder, and that he was therefore entitled to the order which he asked for. He understood it was suggested on the other side that the proposed arrangement was well within the terms of the memorandum of association, and was therefore binding on the plaintiff as a debenture holder. This was not an amalgamation, but an out and out sale to another company, and if carried out all the plaintiff would be entitled to would be a charge on the debentures and shares taken in exchange; for the purchasing company were not bound to pay a farthing in cash. There were authorities to show that when a business ceased, as in this case, to be a going concern, a debenture holder had a right to enforce his security. The fact that a large number of debenture holders in this company did not approve of the plaintiff's action did not alter the plaintiff's strict right, and was no ground for refusing relief to him as an individual having a common right.

The further hearing was adjourned.

LEADLESS GLAZES IN POTTERY.

MR. W. P. RIX, in a paper recently read before the Society of Arts, in London, discussed the possibility of the use of leadless glazes in the manufacture of pottery. He gave a succinct history of the various efforts which have been made during the past century to exclude lead from glazes, and showed specimens of pottery made without its aid, but said none of them could be considered quite successful as applied to coarse earthenware, however suitable they might be for porcelain, and apart from the results produced they did not appear to have been economical. Yet he gave the leading houses great credit for their efforts to solve the problem. Pottery with leadless glazes if applied to earthenware became practically a new manufacture, involving large sacrifice of plant, &c., which meant ruin to the smaller potter. Few of such cases had survived the preliminary ordeal, and fewer still had entered the commercial stage. After noting in detail the improvements made by Minton, Doulton, and many other firms, Mr. Rix said that, notwithstanding their apparenr success, it could not be assumed that they had obtained decisive proof that the general adoption of lead-free glazes was yet possible. It must be proved whether greater expenditure in fuel was needed, and how fat the more accurate control of the glaze-dipping and firing could be met. Such a change could not be made till the new product was shown to be free from increased cost of manufacture. It was therefore still necessary as a precaution, while further experience was being gained, to find the best means of reducing the necessary lead in the present glazes, and to secure the permanent fritting of the whole. The fritting of lead with silica, or borax, or stone could only produce innocuous results when the proportions of earth were such that the whole was chemically combined in a stable form. Most leadless glazes had three

OBJECTIONABLE PROPERTIRS

—opalinity, sluggish fusibility, and inequality of texture. Sluggish fusibility left the slightest inequality of thickness apparent after firing. The absence of lead caused the glaze to be more viscid, but it also made it slower in its response to the fusing temperature. Glazes without lead, therefore, must be dipped as thinly as possible, and much more uniformity of dipping was necessary. Surface inequality gave rise in some glazes to an egg-shell or pitted texture, depriving the ware of the smoothness essential to cleanliness. The permanence and stability of all glazes without lead was of great importance. Owing to the large place occupied by the alkalies as fusible basic substances for lead, it was easily possible to obtain combinations which would prove disastrous in this respect, for whereas lead had proved a reliable support to stability, the alkalies were notoriously treacherous. Doubtless little opportunity has occurred to thoroughly prove the latest mixtures. All that could be said was that they had stood the most severe exposure and the roughest usage without injury. It might, however, be safely stated that with the exercise of due intelligence in compounding a formula no serious risk need be incurred. The scientific data available were amply sufficent to protect the potter. The use of leadless glazes has been fitful and exceptional. Up to the present it could not be said that for the bulk of the trade they had proved practicable. Within the last five years every Staffordshire potter pronounced their adoption impossible. Since that time such advance had been made that some, at least, of the most strenuous opponents had confessed that their views were modified, and that for many classes of ware lead was no longer a necessity. Some went so far as to think that, with increased experience, leadless glazes

MIGHT BECOME AVAILABLE

for nearly all kinds of goods. He was inclined to believe that such a result was only a matter of time.

The Chairman (Professor John Thomson) said he was of opinion that the great variety of shades required by the public was responsible for the poisonous glazes. He trusted the public taste might be modified, perhaps on the basis of the old Eastern pottery, which was content with a more modest selection of colour. Manufacturers ought to be prevented from using glaze highly charged with lead for the sake of increasing their profits.

In the course of the discussion it was urged that the manufacture of ware with leadless glazes to any extent would not be advisable until the ware had been tested in trying climates like that of the Phillipines. Doubts were expressed as to whether ware so made would stand the atmospheric conditions which prevailed in such parts of the world. It was also pointed out that workpeople were often habitually careless in observing Government regulations for their protection.

MANGANESE IN BRAZIL.

THE manganese industry has been recently developed, and several new mines opened in this district between Miguel Brunier and Ouro Preto.

Workable manganese deposits are found in Brazil in the States of S. Paulo, Minas Geraes, and Matto Grosso.

The oxidised ores of Minas Geraes are of the highest quality, as much on account of their large percentage of manganese as for their purity. Phosphorus, usually so injurious, is found in such very low proportions in these minerals as to offer no difficulties whatever to its metallurgy.

The gangue consists principally of silica, alumina, lime, and magnesia, and varies in regard to the latter, sometimes as much as 8 per cent. or more. Iron is sometimes found to about 5 per cent.

The proportion of oxides of manganese is 70 to 75 per cent., giving about 50 to 55 per cent. of metallic manganese, and undoubtedly constitutes a mineral of very high quality indeed. On the other hand, analyses show that these ores contain 10 to 15 per cent. water and volatile matter.

At Miguel Burnier there are two companies engaged in the industry, Airosa and Co, and Costa and Almeida. At Queluz the deposits are the property of Nascimento and Gerspacher, also partners of Airosa and Co. In both places the method of working is by open quarries. The strata being very nearly vertical, the system is advantageous and economical. From the quarry, which is close to the line, the ore is carried to the station in bullock wagons or by a Decauville tramway. The removal of the upper covering of the manganese deposits has been effected generally without method, and the obstruction caused by the dumps on the narrow area available between the quarries and the railway line has been the cause of considerable trouble and expense. Whether mining in place of quarrying would not be cheaper in the long run is a point well worth consideration.

The cost of working varies greatly in proportion to the depth at which the deposit is worked. Senhor Gerspacher when he first commenced working calculated the cost of getting at three milreis per ton; to-day it has increased to 12 milreis. In the quarries of Airosa and Co., at Miguel Burnier, it is estimated at 15 dols 700 reis per ton, and seems extremely high for so friable a class of ore, so easy to get. It is believed that with a little more order and method the price might be easily reduced to 6 milreis per ton.

Trade Notes.

The Owens College Students' Bazaar.—This bazaar, which was held at St. James's Hall on December 15, 16, and 17 last, to raise funds for the levelling, laying and equipment of the new athletic ground at Fallowfield, resulted, after payment of all expenses, in a profit of £3,906.

Attar of Roses, Ltd.—It is reported that a Madras company is about to plant an acre or two of Wynaad land with roses, with a view to the manufacture of attar. It will be interesting, the Indian press thinks, to learn what process of preparation is to be adopted, and to follow the progress of the enterprise. The Indian demand must be very large, apart from the demand for export.

The Manchester Sewage Scheme.—After a prolonged discussion in the Council on Wednesday, the following resolution was passed:—"That the report of the Rivers Committee be approved except as regards the estimate and entering in an agreement with Mr. Baldwin Latham to act as engineer in the construction of the works, and that such excepted portion be referred back to the Rivers Committee for further consideration and report."

Improvements in Hardening Steel.—A. Edison, jun., son of the great inventor, has discovered a process of hardening steel which may revolutionise the industry. A 6in. plate treated by the new process is superior in power of resistance to 15in. ordinary plates. Edison's is said to be also much superior to the Krupp process. The steel rails, Mr. Edison declares, manufactured under his process, will not spread. Tools and bearings are made practically everlasting. The process is to be kept secret until after the Government has experimented with it on armour plates. Mr. Edison is twenty-two years old, and was brought up in his father's laboratory.

American Coal Competing in Europe.—It was announced on the Commercial Exchange at West Hartlepool on Saturday that, as the direct outcome of the late disputes and stoppages in the coal industry of England, the United States is now developing the hold it then obtained of the coal trade, and is shipping coal from Philadelphia and Baltimore to European ports, hitherto supplied exclusively by British coal. A leading Northern merchant states that American coal of excellent quality is now being brought across the Atlantic and unloaded at ports like Genoa, Barcelona, and other places as cheaply as it can be supplied from England. A large steamship firm in Hartlepool was applied to on Saturday by American agents for steamers to carry this coal to Europe at 11s to 12s. per ton freight.—[This is a practical though painful confirmation of the beliefs expressed by us in our issue of August 6th, 1898. Ed. *C.T.J.*]

Market Reports.

TAR AND AMMONIA PRODUCTS.

The dulness of benzols continues uninterrupted. Carbolic acids are in fairly good demand but are without change in prices. Naphthas are quietly steady. Creosote is very firm and dearer. Pitch keeps steady at 25s. to 25s. 6d. f.o.b., East Coast, and 23s. West Coast. Anthracene is quoted 4d. for 30% A, and 3d. for B.

There has been a marked revival in the demand for sulphate of ammonia for prompt, and the forward market begins to show some signs of life, Beckton [quotation for April/June being £10. 5s. Closing prompt values are:—Beckton, £10. 10s.; London (outside makes), £10. 11s. 3d.; Hull, £10. 11s. 3d. and Leith £10. 12s. 6d. to £10. 13s. 9d. Sodium nitrate firm.

MISCELLANEOUS CHEMICAL MARKET.

Business in the alkali trade continues satisfactory in volume, demand being still active, both for export and home trade. For bleaching powder there is considerable inquiry, and price is firm at £5. per ton, hardwoods, f.o.b Liverpool; softwood casks, f.o r. makers' works, remain at £4. 2s. 6d. to £4. 5s. per ton. Caustic soda is without change in position, and quotations are as follows—f.o.b Liverpool, 77%, £7. 12s. 6d.; 74%, £7. 7s. 6d.; 70%, £7.; 60%, £6. per ton, 10-ton lots. Ammonia alkali is firm at £3. 17s. 6d, bags, f o.r. makers' works. Soda crystals and bicarbonate are unaltered. Chlorate of potash and soda are still in abundant supply at 3½d. and 3¼d. respectively. For sulphate of copper there is an active demand, and price is firm at £24., f.o.b. Saltcake remains steady at 28s 6d. to 30s. in bulk, f o r. For sulphur there is a good demand, and price firm at £4. 12s. 6d. per ton. Brown acetate of lime is easier at £4. 15s. to £4. 17s. 6d., c.i.f. U.K. ports. Grey stands at £8. per ton. White sugar of lead is firm at £26. per ton. Litharge slightly easier. For white powdered arsenic quotations are firm at £16. 10s to £16. 15s. for best brands. In aniline oil and salt there are no recent changes. Prussiate of potash is a little weaker in price, at 7¼d *to 7½d. in quantity*. Cyanide firm and in good demand at 1s. 1d. per lb. Sulphocyanides quiet. Tin and zinc salts are firm, and with rather an advancing tendency. Borax continues steady at £16. to £16. 10s. Potash, caustic and carbonate, are in good request, and prices firm. For carbolic acid, crystals and liquid, there is only moderate inquiry, and values are unaltered.

REPORT ON MANURE MATERIAL.

The position of mineral phosphates remains very firm, especially for high grade rocks, but there is very little business actually doing for United Kingdom, manufacturerers being fully occupied with their spring trade in manures. The position of East Indian bone meal is a shade weaker, there being sellers of spot parcels at £5. 2s. 6d. per ton, ex quay Liverpool, and at £5. 1s. 3d per ton for parcels afloat. There is nothing reported in River Plate bones, so that the quotation of £4. 15s. per ton, nett cash terms, can only be considered nominal. Nitrate of soda is firm in all positions, and spot quotations are 8s. per cwt. for ordinary and 8s. 3d. per cwt. for refined quality. A parcel of River Plate dried blood arrived at Liverpool, has been sold on private terms, understood to be at about 9s. 9d. per unit, ex quay, gross weights. There continues to be a large export demand for superphosphates, and there seem to be prospects of a record season.

THE METAL MARKETS.

LONDON, Wednesday.—Pig iron firm: Scotch warrants closed at 53s. 10½d.; Middlesbrough, 46s. 9d. cash; and hematite, 57s. 5d. Copper firm: Chili bars, G.O.B.'s and G.M.B.'s, closed at £68. 7s. 6d. to £68. 12s. 6d. cash, and £68. 12s 6d. to £68. 17s 6d. three months Tin steady: Straits closed at £108. 2s. 6d. to £108. 12s. 6d. cash, and £108. 10s. to £109. 0s. three months; Australian, £108. 12s. 6d.; English ingots, £111. 0s. Lead steady: Spanish, £14. 2s. 6d.; English, £14. 7s. 6d.; Silesian spelter, ordinary, £27. 2s. 6d. Nickel, 1s. 2½d. Antimony, £39. Quicksilver: First hands, £8. 5s.; second hands, £8. 2s. 6d. *Copper shares* steady: Cape, 4 to 4⅛; Copiapo, 3 5/16 to 3 5/16; Libiola, 2 1/16 to 2 5/16; Mason and Barry, 3¼ to 4; Rio Tinto, 38 15/16 to 38 15/16; Tharsis, 8½ to 8¾.

GLASGOW, Wednesday.—Market firmer, and a good business. Scotch done at 53s. 7½d., 53s. 8½d., 53s. 7d., and 53s. 8½d. cash; also at 53s. 10d½., 53s. 11½d, 53s. 10½d., and 53s 11½d. month; buyers, 53s. 8½d. cash; sellers, 53s. 9d. Cleveland done at 46s. 8d. cash, and 47s. month; buyers, 46s. 9d. cash; sellers, 46s. 10d. Cumberland hematite done at 57s. 5½d., 57s. 4d, and 57s. 5d. cash; also at 57s. 8d to 57s. 8½d. month; buyers, 57s. 5d. cash; sellers, 57s 6d. Middlesbrough hematite idle.

LIVERPOOL OIL AND COLOUR MARKET.

Wednesday.

OILS.—Palm oil is only offered in small lots, and at full prices, so that transactions have been few. Olive keeps steady, there being but moderate supplies available. Linseed is firm, with Liverpool makes at 19s. to 19s. 6d. cwt. in export casks. Cottonseed steady at 17s. to 17s. 6d. cwt. for Liverpool refined. Castor oil steady on spot, with good seconds Calcutta 2⅞d., this also being quotation for first pressure French. Tallow is firm and well held for full values; sellers are very cautious. Resin is moving fairly well in all grades, at recent currencies. There is a moderate spot business doing in spirits of turpentine at 33s. 6d. cwt. Petroleum steady at 5½d. to 6d. for Russian refined, and 6d. to 7¼d. for American.

CAKES.—Prices of American Western linseed on the spot are barely steady at £6. 7s. 6d to £6. 15s., but a fair amount of inquiry has been experienced, and the tone at the close is steady. Other imported descriptions remain without any noticeable improvement in the demand, and sellers still offer Bombay at £6. 18. 9d. to £7. 5s. and Russian at £7. 7s. 6d. per ton, whilst in the continued absence of supplies of River Plate in first hands the quotation remains nominal. Liverpool makes have been in moderate request, and the value is steadily maintained at £8. to £8. 10s. per ton, according to brand. Good to choice brands of American decorticated cottonseed are well held, and the value is now given at £5 12s. 6d. to £6., according to quality, being a partial improvement of 2s. 6d, and a fair amount of trading has been concluded. Liverpool makes also move off to a moderate extent at recent currencies, the tone being quite steady at £6. 5s. to £6. 15s. per ton, according to brand. Undecorticated Liverpool makes have sold to a fair extent at steady prices, viz., £4. 16s. 3d. to £5. 5s., according to brand, whilst Egyptian on the spot are firm and 2s. 6d. dearer, sellers now asking £4. 12s. 6d. per ton for sound, ex quay.

COLOURS.—Prices are steady, and practically without change. Ochres: Oxfordshire—common £10., medium £12., best £15.; Derbyshire—common 40s., medium 50s., best 60s.; Welsh—best 90s.; seconds, 50s., and common, 18s; Devonshire, 40s. to 45s.; French, J.C., 65s. Umber: 40s. to 45s. White lead: £16. Red lead unchanged. Venetian red: £6. to £10. [Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7.; medium, £10.; finest, £20. Zinc oxide: £22. 10s. to £25.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—The markets for these commodities here show an upward tendency, and have done throughout the past week, owing largely to the very limited supply of seed, the imports showing a remarkable falling off with the exception of the manufactured article. Linseed cake being increased by double whilst mills here are closed, this situation will never be remedied so long as crushers are dependent upon merchants for their supplies. The imports to date have been: Linseed 64,423 qrs., against 46,764 qrs. Linseed cakes 6,129 tons, against 3,860 tons a year ago. Rapeseed 25,053 qrs., against 17,429 qrs. Cottonseed 42,765 tons, against 20,756 tons. Olive Oil 616 tuns, against 808 tuns. Tar 885 barrels, against 607 barrels. Linseed oil has advanced upon the week about 5/- per ton, and closes firm at 17/6 to 17/7½ naked spot; 17/3 month; 17/- April; 16/7½ May/August; 16/- bidding for last four months; boiled and refined, £1. to £1. 10s. per ton extra. Refined cotton oil upon the week has advanced considerably, being about 15/- per ton higher, the market closing quiet at 15/1½ spot and to April; 15/3 May/August, crude spot being quoted 13/10½, casks £1. and ordinary barrels £1. 10s. per ton extra. Oleines from £18. 10s. to £21. per ton. Castor oil, extracted here, cold drawn pharmaceutical, 28/6 per cwt. in barrels; 3¾d. per lb. in cases; pure firsts 26/- in barrels; 3 1/16d. per lb. in cases; seconds 25/- per cwt., 2 15/16d. per lb. in cases. Arachide nut oils from 26/- per cwt. Olive oil £31. 10s. to £33. Olive oil soap, £16. to £18. per ton. Resins unchanged.

CAKES.—The market values are firm, with a very limited supply of Hull made cakes. Linseed cakes steady; 95% pure £8. to £8. 5s. per ton. Oil cakes (linseed) £7. to £7. 5s.; Russians, £7. to £7. 10s. Cotton cakes firm, best makes, £5. 5s. to £5. 7s. 6d.; seconds, £4. 17s. 6d. to £5. 2s. 6d.; decorticated, £6. 5s. to £6. 10s. Meal, £6. Rape cakes: Black Sea, £4. 2s. 6d to £4. 5s.

PAINTS in good demand; values unchanged.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

In the ordinary chemicals there are no changes of value to record, but the tone seems to indicate some little of further improvement. This is no doubt at least partly due to the approaching reopening of the Baltic outlet. Sulphate of copper still leans to the down grade, but last week's price of £23. 10s., Liverpool, has not yet been broken. mineral oils and solid paraffins remain steady, and notwithstanding the advanced period of the consumptive season the call for the former is still brisk, taxing the powers of some of the makers to keep their engagements. In sulphate of ammonia the movement has been slightly upwards, and makers hold confidently for ten guineas f.o.b. Leith prompt. Glasgow delivery has fetched £10. 12s. 6d. in at least one transaction. Forward business shows signs of reawakening.

Chief prices current are:—Soda crystals, £2. 5s. to £2. 7s. 6d. basis nett, Tyne; soda ash, £4. 2s. 6d. to £4 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 5s. to £4. 15s. nett, Glasgow; caustic soda, white, 74° £7. 7s. 6d, 70/72° £7., 60/62° £6., and cream 60/62° £6., all nett, Liverpool; bleaching powder, 35/37°, £5. to £5. 10s. nett, Tyne; saltcake, 30s.; borax, English refined, £16., and boracic acid, £26. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s., nett, Liverpool; bichromate of potash, 3½d., less 6% for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d., less 6% for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow); chlorate of potash, 3½d., less 5% Liverpool; nitrate of soda, 8s. 3d.; sulphate of ammonia, £10. 10s. 0d., prompt, f.o.b. Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £23. 10s., less 5% Liverpool; paraffin scale, hard, 1⅞d. to 2d. per lb., and soft 2d. per lb.; paraffin wax, 120° semi-refined, 2¼d. to 2½d. per lb; paraffin spirit (naphtha), 9d. to 10d. per gal; paraffin oil (burning), No. 1, 6½d.; and crystal, 7d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 15s. to £5. 5s., 885° £5. 10s. to £6., and 890/895° £6. 5s. to £6. 10s. Week's imports of sugar at Greenock were *nil*.

TYNE CHEMICAL REPORT.

TUESDAY.

Chemicals are steady but with only a quiet demand. Soda crystals are quoted £2. 12s. 6d. per ton. gross weight locally. Caustic soda 70% £7. and 76/77%, £7. 15s, and £8. per ton. Sulphur £4. 12s. 6d per ton.

Bleaching powder, softs, £5. 5s. per ton, nett; do., hards, £5. 10s. per ton, nett; caustic soda: 76/77% £8., and 70% £7. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do, 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75°Tw., £2. 12s. 6d. per ton, nett; do., 100°Tw., £3. per ton, nett; do., 140°Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s od. per ton, nett; blanc fixe, £6. 10s. per ton nett; chloride of barium, refined crystals, £6. 15s. od. per ton, nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt is firm at 9s. 6d. per ton, f.o.b. Tees.

COALS.—Market generally is still firm, tho' with the approach of finer weather gas and household coals are in lessened consumption and prices a shade weaker in consequence. Best Northumbrian steam are in good demand. Coke is also in excellent demand and price very firm. Best Northumbrian steam, 11s. to 12s. per ton; second qualities, 10s. to 11s. per ton; small steam, 4s. 9d to 5s per ton; gas coals, 10s. to 11s. per ton; bunker coals, 8s. to 8s. 6d. per ton; household coals, 10s. to 11s. per ton; coke, 19s. to 21s. per ton.

New Companies.

Buffington Acetylene Gas Light Co., Ltd.—CAPITAL £100,000. in £1. shares This company has been formed to adopt an agreement with the International Industrial Syndicate, Ltd., and to acquire, work, and deal with patents and inventions relating to the manufacture of generators and lamps, and to the manufacture and production of carbide of calcium and acetylene gas. The subscribers to the memorandum of association are:—E. H. Jones, 9, Elm Villas, Southend-on-Sea, agent; J. S. Macdonald, 66a, Chandos-street, Strand, secretary; G. W. MacAvoy, 7, Inverness Terrace, W., secretary; J. M. Darnell, 49, Cambridge Square, N. W., railway contractor; F. A. Briggs, 18, Bloemfontein Avenue, Uxbridge-road, W., clerk; C. Holland, 1, Garnies-street, Peckham, S.E, clerk; J. B. Whitehead, 119, Huddleston-road, Tufnell Park, N., clerk.

Guano and Oils, Syndicate, Ltd.—CAPITAL £7. in £1. shares. This company has been formed to adopt an agreement with Dawson and Co., and to acquire and deal with guanos, nitrates, asbestos, phosphatic deposits, oils, etc.

Hercules Patent Soap Co., Ltd.—CAPITAL £150,000. in £1. shares (60,000 5½ per cent. cum. pref.) This company has been formed to acquire the business carried on at Dean Hill, Buersil, near Rochdale, and elsewhere, as the Hercules Patent Soap Manufactory to acquire British Patent No 15,156, of 1897, to adopt an agreement with Nicolls, Kirkness and Co., and to carry on the business of manufacturers of soap, candles, oil, tallow, glycerine, chemicals, paints, etc. The subscribers to the memorandum of association are:—H. E. Aykroyd, Thornfield, Duckworth Lane, Bradford, dyer; W. A. Brown, 93, Rochdale-road, Harpurhey, Manchester, soap manufacturer; F. Jackson, Clough Bank, Bollington, Cheshire, mill manager; J. R. Meanock, Manor House, Royton, velvet cutter; Geo. L. Mills, Grove Cottage, Didsbury, tea merchant; K. Seville, 268, Bury New Road, Higher Broughton, Manchester, cloth agent; J. J. Burton, 7, Brazennoze-street, Manchester, chartered accountant.

Liverpool Creosoting Co., Ltd.—CAPITAL £1,000. in £50. shares. This company has been formed to carry on the business of timber merchants, saw mill owners, creosoters of timber, shipowners, etc.

Lyme Regis Cement Co., Ltd.—CAPITAL £75,000. in £1. shares. This company has been formed to adopt an agreement with A. Cotton, and to manufacture and deal in cement, lime, plaster of Paris, whiting, bricks, tiles, pipes, artificial stone, etc. The subscribers to the memorandum of association are:—J. H. G Davies, Ingleside, Halifax, gent.; S. Rowe, 8, Bucklersbury, E.C., solicitor; J. S. Pooley, Redruth, Cornwall, mining engineer; E. T. Walker, 1, Cheapside, W., Hampstead, student; E. T. Close, 8, Bucklersbury, E.C., clerk; G. D. Hare, 31, Archway-road, Highgate, solicitor; J. A. Cassin, 3, Manor-road, Beckenham, clerk.

Gazette Notices.

PARTNERSHIPS DISSOLVED.

J. D. SUTCLIFFE and F. B. STATHAM, ventilating engineers, Manchester, under the style of Sutcliffe, Statham, & Co.

T. BIRCH and J. PITT, glue manufacturers, Leeds, under the style of Pitt & Birch.

BANKRUPTCY ACTS, 1883 and 1890.

Adjudication.

GRAY, WILLIAM and HERBERT, trading together in co-partnership, under the style of William Gray, Kingston-upon-Hull, oil refiners, etc.

IMPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.
Week ending March 4th.

Acetic Acid—
Holland, 50 cs. R. W. Greeff & Co.
" 19 Phillipps & Graves
" 17 H. Lorenz
" 100 A. & M. Zimmermann

Alkali—
France, 236 c. J. Harrison
" 360 J. Barber & Co.

Alum—
Holland, 17 cs. J. White

Antimony Ore—
Australia, 20 t Hallatt & Frey
" 13 Drolenvaux & Bremner
E. Indies, 45 H. Grey, Junr

Arsenic—
Melbourne, 60 cks. G H. Adams & Co.

Barium Chloride—
Holland, 44 cks. Petri Bros.

Barium Sulphate—
Belgium, 17 cks. J L. Lyon & Co.
" 800 bgs. 221 brls. O'Hara & Hoar

Barytes—
Holland, 24 cks. O'Hara & Hoar
" 24 pks. P. Jantzen
Germany, 2 R. W. Greeff & Co.
Holland, 109 W. Harrison & Co.
Germany, 38 J. L. Lyon & Co.
" 38 38 cks. P. Jantzen
" 45 W. Harrison & Co.
" 300 bgs. Burrell & Co.

Bleaching Powder—
France, 54 cks. J. M. Steel & Co.
Holland, 130 "

Bones—
Germany, 24 t. E. Groschke
Sydney, 45 Hicks, Nash, & Co.

Bromine—
Germany, 20 cs. A. & M. Zimmermann

Caoutchouc—
Aden, 12 c. Major & Field
" 39 Wallace Brs.
" 6 L. & I. D. Jt. Co.
France, 70 H. Kiver & Co.
Germany, 11 A. C. Lloyd
France, 30 Brooks & Green
Lomas, 85 L. & I. D. Jt. Co.
Madagascar, 30 Procter Brs.
" 15 Prop. Bull Wf.
Straits, 99 Huttenbach & Co.
Germany, 30 Prop. Bull Wf.
Colon, 75 "
" 43 Stiebel Brs.
Zanzibar, 38 Forbes, Forbes & Co.
Natal, 27 Lewis & Peat
E. Indies, 25 "
Colon, 21 "
" 5 Anderson, Weber & Smith
" 71 Prop. Bull Wf.
" 24 S. Figgis & Co.
Zanzibar, 49 L. & I. D. Jt. Co.
Madagascar, 22 Kleinwort, Sons & Co.
Straits, 360 Gilman Brs. & Co.
Madagasca, 192 L. & I. D. Jt. Co.

Castor Oil—
France, 27 cs. Beresford & Co.
" 75 W. Balchin, Ld.
" 15 L. & I. D. Jt. Co.
E. Indies, 15 cks. J. W. Cook & Co., Ld.
France, 30 brls. Lucas & Spencer's Wf., Ld.
Belgium, 57 W. T. Mills

Caustic Potash—
France, 40 dms. W. E. Cole
Germany, 18 J. M. Steel & Co.

Chemicals (*otherwise undescribed*)
Germany, £6 T. Palmer
Belgium, 464 T. H. Lee
Germany, 50 R. W. Greeff & Co.
" 440 L. & I. D. Jt. Co.
France, 54 Mory & Co.
Belgium, 29 Leach & Co.
" 8 T. Ronaldson & Co
Germany, 110 Craven & Co.
Japan, 40 L. Chotyen & Co.
France, 5 Burnett Brs. & Sons
Belgium, 44 John Cockerill Line
Holland, 160 S. C. Jones
Germany, 210 H. Lambert
" 166 A. & M. Zimmermann
" 24 *Butler's Wf., Ld.*
" 32 *T. H. Lee*
Belgium, 479 T. Palmer
Holland, 33 T. H. Lee
U. States, 100 H. Harkness

Citrate of Lime—
Italy, 21 cks. B. Jacob & Sons
" 24 Thames S. T. & L. Co., Ld.

Copperas—
Germany, 34 cks. Burgoyne & Co.

Cream of Tartar—
France, 25 pks. W. C. Bacon & Co.
" 3 Blackmore, Leconte & Co.
" 5 F. C. Devon & Co.
Belgium, 4 B. & F. Wf. Co., Ld.
Spain, 14 "
" 2 cks. W. C. Pantin
France, 5 B. & F. Wf. Co., Ld.
" 5 cs. W. C. Bacon & Co.

Dyestuffs—
Argols
Italy, 80 pks Thames S. T. & L. Co., Ld.
France, 29 B. & F. Wf. Co., Ld.
Cape, 30 W. Kemsley & Co.
" 3 J. R. Thomson & Co.
El Cargador, 29 39 cks. Thames S. T. & L. Co., Ld.

Cochineal
Canary Is., 4 bgs. W. M. Smith & Sons
" 40 L. & I. D. Jt. Co.

Cutch
E. Indies, 1,150 cs. A. Howden & Co.

Extracts
Denmark, 1 pk. M. D. Co.
France, 75 cks. B. & F. Wf. Co., Ld.
Holland, 1 Powell, Jones & Co.
Italy, 8 cs. A. Laming & Co.

Gambier
Straits, 467 bgs. Beresford & Co.

Indigo
E. Indies, 15 chts. Hadenfeldt & Co.
" 154 Perkins & Homer
" 9 Croysdale & Co.
" 17 L. Archard & Co.
" 27 B, W. Blydenstein & Co.
" 27 Thomasset & Co.
" 49 Lon. & Til. Ltge. C. & D. Co.
" 24 Elkan & Co.
" 20 Ralli Brs.
" 43 E. Bower & Co.
" 343 266 pks. P. & O. S. N. Co.
" 11 1 bx. Darling Brs.
" 26 J. Hatton Hall & Co.
" 26 J. W. Cook & Co., Ld.
" 11 H. Johnson & Sons
" 57 Fruhling & Goschen
" 220 J. Karples & Co.
Colon, 60 srns. L. & I. D. Jt. Co.
E. Indies, 36 chts. 747 pks. A. B. Curtis & Co.
Colon, 50 srns. Lazard Brs.
" 20 Mancha & Co.
" 41 Schloss Brs.
" 75 W. J. & H. Thompson
" 38 Chalmers, Guthrie & Co.
E. Indies, 126 chts. L. & I. D. Jt. Co.
" 17 Montgomerie & Workman
" 67 W. J. & H. Thompson
Belgium, 3 cs. John Cockerill Line

Myrabolams
Holland, 1 ck. Becker & Wagner
E. Indies, 2,000 pks. P. & O. S. N. Co.

Saffron
Spain, 1 cs. J. Knill & Co.
" 1 Major & Field

Shumac
Italy, 20 bgs. Pickford & Co.
" 1,400 J. W. Cook & Co., Ld.

Tanners' Bark
Natal, 10 t. A. & W. Nesbitt
" 11 Flack, Chandler & Co.
Auckland, 92 G. H. Penney & Co.
Adelaide, 6 Leach & Co.

Valonia
Melbourne, 50 t. L. & I. D. Jt. Co.
A. Turkey, 50 M. D. Co.

Farina—
Germany, 100 bgs. J. Barber & Co.
" 350 pks. R. Bennett & Co.
U. States, 11 L. & I. D. Jt. Co.
France, 3 H. Ewald & Co.
" 1 E. Flageollet & Co.
Germany, 50 bgs. J. Laing, Son & Co.
N. Russia, 9 Van Oppen & Co.

Glucose—
France, 300 pks. 300 cwt. Trier, Meyer & Co.
U. States, 500 500 Ohlensch-lager Brs.
" 2,000 2,000 Bellamy's Wf., Ld.
" 500 500 L. Norman & Co., Ld.
" 2,000 2,000 E. Thompson & Co.
" 500 500 Beck & Pollitzer
" 1,000 1,000 Humphrey & Co.
" 1,500 1,500 Fellows, Morton & Co., Ld.
" 225 1,350 W. Grose & Co.
" 500 500 Perkins & Homer
" 50 287 F. W. Mann
" 200 1,368 Lipton, Ld.
" 250 250 L. & I. D. Jt. Co.
" 500 500 Pickford & Co.
" 250 250 C, Mangold & Co.
" 4,200 7,750 R. G. Hall & Co.

Glue—
France, £100 W. J. Davies & Sons
U. States, 132 L. & I. D. Jt. Co.
" 33 J. Harrison
" 11 Mory & Co.
" 120 Morison, Pollexfen & Co.
Germany, 180 L. & I. D. Jt. Co.
" 170 W. W. Jones & Co.
Holland, 40 A. G. Robinson & Co.
Germany, 34 M. Dk. Co.
France, 23 Mory & Co.
U. States, 75 Parsons, Fletcher & Co.
Belgium, 1,472 T. M. Duche & Sons
France, 892 "
Belgium, 55 Leach & Co.
U. States, 69 Ldn. Parcels Del. Co.

Glycerine—
France, £400 Phillipps & Graves
" 590 Burnett Brs. & Sons

Guano—
Ichaboc Is., £445 R. Bensusan
Cape Cross, 400 t. A. Hunter & Co.

Gutta Percha—
Straits, 103 c. Huttenbach & Co.
" 368 Gilman Brs. & Co.
" 1,039 W. H. Jewsbury & Co.
Germany, 49 Vokins & Co., Ld.
" 50 Pickford & Co.

Lead Acetate—
Germany, 20 cks. F. Bochin

Litharge—
Germany, 17 cks. H. Wallace & Co.

Lithopone—
Germany, 4 cks. Taylor Brs.
" 1 C. F. Gerhardt
" 40 brls. J. Matton

Manganese Ore—
Germany, 5 t. Becker & Wagner
" 1 G. Boor & Co.

Manure—
Belgium, 1 t. J. E. Kitton
" 10 H. Johnson & Sons
" 25 T. Ronaldson & Co.
Germany, 50 F. W. Berk & Co., Ld.
" 10 Brasch & Rothenstein
" 10 Argo S. S. Co.
E. Indies, 267 A. Hunter & Co.
" 44 Dyster, Nalder, & Co.

Methyl Alcohol—
Germany, 1,584 g. W. Iszard
" 130 J. Norrenburg & Co.
France, 1,220 Lister & Biggs

Molasses—
Germany, 400 cks 2,043 c. G. Hornzee

Ochre—
Holland, 50 pks. Phillipps & Graves
France, 21 W. Himmon
" 4 cks. O'Hara & Hoar
" 224 W. Harrison & Co.

Paraffin Wax—
U. States, 538 cs. Anglo-American Oil Co
" 1,120 brls. *Lon. & Til. Ltge C. & D. Co.
Rangoon, 800 bxs. H. Hill & Sons

Phosphates—
U. States, 2,500 t. Anglo-Contl. Guano Works

Potassium Bicarbonate—
Holland, 6 cks. A. & M. Zimmermann
17 cs.

Potassium Bichromate—
Germany, 30 cks. J. W. Cook & Co., Ld.

Potassium Bromide—
Germany, 32 cs. R. W. Greeff & Co.

Potassium Carbonate—
France, 65 c. Petri Brs.
" 27 t. Lon. & Til. Ltge. C. & D. Co.
Holland, 1 Petri Brs.
Germany, 18 J. M. Steel & Co.
" 10 c. R. W. Greeff & Co.
" 65 H. Lambert

Potassium Prussiate—
Belgium, 4 brls. J. Harrison

Potassium Sulphate—
Germany, 100 bgs. F. W. Berk & Co., Ld.
" 150 Bessler, Waechter, & Co.

Salicylic Acid—
Germany, 21 pks. Butler's Wf., Ld.
Belgium, 10 John Cockerill Line

Saltpetre—
E. Indies, 1,838 bgs. Lucas & Spencer's Wf.
" 663 Perkins & Homer
Germany, 78 pks. P. Hecker & Co.

Sodium Hypochlorite—
Germany, 200 cs. H. Lambert

Sodium Phosphate—
Germany, 1 ck. H. Lambert

Sodium Prussiate—
Belgium, 17 pks. J. Owen
Germany, 25 cks. "

Starch—
U. States, 20 pks. Beck & Pollitzer
" 10 crts. Lunham & Moore
" 100 brls. Valentin, Tod, & Co.
Germany, 800 pks. C, Tennant, Sons, & Co.
" 6 cks. Butler's Wf., Ld.
Belgium, 202 cs. T. Ronaldson & Co.
" 72 Leach & Co.
" 29 pks. "
" 500 cs. E. & T. Pink
France, 450 "
" 450 W. E. Cole
Holland, 10 pks. Phillipps & Graves
" 70 cs. "
" 2,103 Little & Johnston

Stearine—
Belgium, 10 cs. J. Harrison
" 50 bgs. "
" 50 D. C. Thomas & Sons
" 63 H. Hill & Sons
" 8 cks. "
France, 383 bgs. "

Tallow—
Chan. Is., 9 brls. Cheeswright & Ford
Sydney, 354 cks. Deering & Robottom
" 198 Goad, Rigg, & Co
" 110 L. & I. D. Jt. Co.
" 430 G. S. Yuill & Co., Ld.
" 358 Anning & Cobb
" 55 H. Lambert
" 50 Cuthbert & Hall
Brisbane, 175 Goad, Rigg, & Co.
N. Zealand, 290 "
" 178 N. Z. L. & M. A. Co.
" 178 Col. Consign. & Dist. Co.
" 9 Hicks, Nash, & Co.
" 29 Deering & Robottom
Holland, 10 Phillipps & Graves

Tallow and Stearine—
Denmark, 3 cks. Mwll Dk. Co.

Tar—
Russia, 205 brls.

Tartaric Acid—
France, 2 pks. Carey & Sons
Holland, 44 Kirkpatrick, Barr, & Co.

Ultramarine—
Germany, 1 pk. Argo S. S. Co
" 8 H. Brock & Co
" 22 Steinhoff, Sons, & Co
" 8 D. Storer & Son

Holland, 10 W. Harrison & Co.
" 4 cks. J. Barber & Co.
" 5 cs. Hernu, Peron, & Co.

Varnish—
Germany, 42 pks. Butler's Wf., Ld.
" 2 L. & I. D. Jt. Co.
" 64 brls. L. & N.-W. R. Co.
U. States, 78 pks. Taylor Brs.

White Lead—
Holland, 109 pks. W. Harrison & Co.
" 58 W. Balchin. Ld.
" 29 Burrell & Co.
" 20 cks. Randall Brs.
" 20 Kerestidji & Co.
" 20 A. & M. Zimmerman
Germany, 15 H. Lambert
" 57 Wilkinson, Heywood, & Co.
" 11 Taylor Brs.
" 31 J. Graves
Belgium, 49 brls D. C. Thomas & Sons
" 10 cks. J. L. Lyon & Co.

Wood Pulp—
Sweden, 400 pks. W. G. Taylor & Co., Ld.
" 160 Henderson, Craig, & Co.
Norway, 800 Johnsen & Jorgensen
France, 39 W. G. Taylor & Co., Ld.
Belgium, 2,451 J. Harrison
Canada, 2,328 Becker & Co
N. Russia, 40 L. & N.-W. Rly. Co.

Zinc Oxide—
Holland, 130 brls. M. Ashby, Ld.
Germany, 45 "
" 45 Perkins & Homer
" 12 A. G. Robinson
" 500 cks. Soundy & Sons
U. States, 200 brls. M. Ashby, Ld.
" 62 Carledge & Batchelor

LIVERPOOL.

Week ending March 2nd.

Aluminium—
New York, 500 bxs.

Bone Meal—
B. Ayres, 527 bgs. V. Picasso & Co.
Calcutta, 1,120
Bombay, 1,000 W. & R. Graham & Co.
" 998

Bones—
Alexandria, 235 bgs.

Calcium Carbonate—
Antwerp, 1 cs.

Castor Oil—
Calcutta, 250 cs.
Marseilles, 30 Langstaff & Co.
" 5 cks. F. Boehm
" 25

Colours—
Stettin, 25 cks. A. Wilkinson & Sons
Rotterdam, 1 17 tubs

Cottonseed Oil—
Norfolk, 2,000 brls.

Cream of Tartar—
Bordeaux, 26 cks.
Marseilles, 2
Barcelona, 2 pks. F. & L. Sikler

Dyestuffs—
Argols
Bordeaux, 39 cks.
Cochineal
Las Palmas, 5 bgs. G. S. Bruce
" 58 Kennedy & Moore
Extract
Fiume, 300 brls. Oak Extract Co.
Rouen, 281 cks. Co-op. W'sale Society, Ld.
Havre, 10 Cunard S. S. Co.
Fiume, 400 brls.
Baltimore, 100 H. Rooke, Sons & Co.
Philadelphia, 40
Farina
Fiume, 496 bgs.
Indigo
Calcutta, 148 chts.
Logwood Extract
Halifax, 138 bxs. W. I. Chem. Wks., Ld.
Antwerp, 49 cks.
Myrabolams
Bombay, 1,232 bgs. W. & R. Graham & Co.

1,449

Shumac
Marseilles, 7 bls.
Palermo, 100 bgs. J. Kitchen & Co.
" 1,050
Valonia
Patras, 1,479 bgs.

Dyewood Extract—
New York, 120 brls. McArthur & Co.
Philadelphia, 85 bls.

Glucose—
Newport News, 200 brls. L. Sutro & Co.
St. John, 67 Colby & Co.
" 100 T. M. Duche & Sons
" 400

Glue—
Rouen, 10 bgs. Co-op W'sale Society, Ld.
Marseilles, 1 cs.
Antwerp, 4 bls.

Glycerine—
Marseilles, 3 dms.

Gutta Percha—
Africa, 110 bgs. Royal Niger Co.

Ochre—
Marseilles, 87 cks.
Rouen, 9 R. J. Francis & Co.

Paraffin Scale—
New York, 90 brls. Anglo-Am. Oil Co.

Phosphates—
Ghent, 1,000 bgs.

Potash—
Antwerp, 2 cks.
Rouen, 57 Co.-op. W'sale Society, Ld.

Pulp (Mica)—
New York, 17 brls. House & Co.

Pyrites—
Huelva, 4,299 t. Mathieson & Co.
Antwerp, 959 bgs. J. T. Fletcher & Co.

Red Lead—
Rotterdam, 11 cks.

Resin—
Baltimore, 1,497 brls.

Salt—
Boston, 455 bxs.

Saltpetre—
Rotterdam, 100 cks.
Hamburg, 26

Soap—
Genoa, 100 cs.
Corfu, 2
Norfolk, 1,365 brls.
Newport News, 100 bxs. H. A. Lane & Co.
New York, 2,000
Africa, 1
Marseilles, 145 40 cs. 8 dms.
" 10 Evans, Sons & Co.
Boston, 2
New York, 500 550 cs. A. Booth & Co.
Philadelphia, 1,800 125 crts.

Soap Stock—
New York, 300 brls.

Soapstone—
Genoa, 300 bgs.

Sodium Nitrate—
Caleta Buena, 30,320 qntls. Schnitz & Co.

Starch—
Newport News, 400 cks. 110 bxs
New York, 100 bgs T. M. Duche & Sons
Hamburg, 40 cs.
Antwerp, 40

Tallow—
Norfolk, 591 brls.
New York, 692 brls. Colby & Co.
" 250 tcs. 1 pk.
Baltimore, 140 200 hhds.

Tannin Extracts—
Marseilles, 125 cks.

Tartaric Acid—
Marseilles, 4 cks. 4 brls.

Varnish—
Rotterdam, 3 cks.
New York, 2 brls. Bretna & Co.
" 5

Wood Pulp—
Halifax 1,000 bls. Abbott & Co.
St. John's, Nfd., 1 pk. C. T. Bowring & Co.
Oporto, 250 bls.
Gothenburg, 10 Cowan & Co.
" 8 G. F. Green & Co.
" 80 L. & N. W. Rly. Co.
Boston, 119 bdls. 354 cs. Spicer Bros.

MANCHESTER.

Week ending March 4th.

Alizarine—
Rotterdam, 41 cks.

Barytes—
Antwerp, 340 bgs.

Caustic Potash—
Treport, 21 dms.

Chemicals *(otherwise undescribed)*
Rotterdam, 5 cks.

Chlorate—
Gothenburg, 20 kgs.

Coal Products—
Naphthol
Rotterdam, 3 cks.

Colours—
Ghent, 7 cs.
Rotterdam, 46 cks. 29 14 bxs. 47 brls.

Dried Blood—
Rouen, 20 cs.

Dyestuffs—
Extracts
Nantes, 120 cks.
Rotterdam, 3
Rouen, 23
Indigo
Rotterdam, 2 chts.

Farina—
Hamburg, 100 bgs.
Rotterdam, 250
Stettin, 1,852 Browne, Geveke, & Co.
" 712
" 300 W. H. Stott & Co.

Glucose—
Rotterdam, 10 cks.
Stettin, 1,000 bgs. 332 cks.

Glue—
Antwerp, 33 pks.
Rotterdam, 100 bgs.
Rouen, 8 cks. 100 bgs.
Stettin, 100

Molasses—
Stettin, 40 brls. W. H. Stott & Co.

Ochre—
Treport, 58 cks.

Potash—
Rotterdam, 11 cks.

Potassium Carbonate—
Treport, 2 cks.

Potassium Prussiate—
Antwerp, 6 cks.
Rotterdam, 5
Rouen, 5

Soap—
Nantes, 10 dms.

Sodium Nitrate—
Rotterdam, 4 cks.

Starch—
Antwerp, 460 cs.
Rotterdam, 316 20 bls.

Stearine—
Antwerp, 6 bgs.

Tartaric Acid—
Bordeaux, 18 cks.
Rotterdam, 10 kgs. 40 cks.
Rouen, 5 cs.

Ultramarine—
Rotterdam, 4 cks.

Waste Salt—
Hamburg, 51 bgs.

Wood Pulp—
Christiania, 3,560 bls.
Gothenburg, 493
Sarpsborg, 2,515 Kellner, Partington P. P. Co., Ld.

Zinc Oxide—
Antwerp, 8 cks. 25 brls.

HULL.

Week ending March 4th.

Acids—
Bari, 118 cks. Wilson, Sons, & Co., Ld

Alizarine—
Rotterdam, 33 pks. 1 bx. 27 brls. Hull & Netherlands S. S. Co.

Barytes—
Amsterdam, 23 cks. Hull & Netherlands S. S. Co.
Bremen, 40 G. Holmes & Co.

Chemicals *(otherwise undescribed)*
Antwerp, 85 brls. Wilson, Sons, & Co., Ld.
Dunkirk, 24 cks.
Gothenburg, 20 kgs. "
Hamburg, 3 pks. "
Rotterdam, 1 ck. Hull & Netherlands S. S. Co

Colours—
Antwerp, 26 pks.
Bremen, 9 J. Pyefinch & Co
Danzig, 1
Dunkirk, 36 bgs. Wilson, Sons, & Co., Ld.
Ghent, 12 brls. "
Hamburg, 2 pks. "
Rotterdam, 69 5 bxs. 39 brls. 3 cks. Hull & Netherlands S. S. Co.

Cream of Tartar—
Bordeaux, 3 cks.
Rotterdam, 2 Hull & Netherlands S. S. Co

Creosote Salts—
Rotterdam, 14 cks. Hull & Netherlands S. S. Co.

Dextrine—
Stettin, 200 bgs. Wilson, Sons, & Co., Ld.

Dyestuffs—
Extracts
Bordeaux, 20 cks.
Indigo
Rotterdam, 7 chts. Hull & Netherlands S. S. Co.
Shumac
Palermo, 173 bls. Wilson, Sons, & Co., Ld.
" 1,630 bgs.
Trieste, 156 "

Dyewood—
Antwerp, 50 bdls. Wilson, Sons, & Co., Ld.

Farina—
Hamburg, 100 bgs.
Harlingen, 100 bls. Hull & Netherlands S. S. Co.
" 50 Wilson, Sons, & Co., Ld.
Stettin, 100 bgs. "

Glucose—
New York, 170 brls.
Stettin, 10 cks. Wilson, Sons, & Co., Ld.

Glue—
Antwerp, 10 cs. Wilson Sons, & Co., Ld.
Hamburg, 50 bgs. Bailey & Leetham, Ld.
" 100
Rotterdam, 20 Hull & Netherlands S. S. Co.

Glue Stock—
Bari, 43 bls. Wilson, Sons, & Co., Ld.
Hamburg, 24
Trieste, 3 "

Linseed Oil—
Rotterdam, 716 brls. Hull & Netherlands S. S. Co.

Lithopone—
Amsterdam, 20 cks. Hull & Netherlands S. S. Co.
Rotterdam, 40 2 cs. "

Magnesite—
Hamburg, 2 cks. Lofthouse & Saltmer

Manure—
Riga, 1,000 bgs.

Phosphates—
Ghent, 80 t. Wilson, Sons, & Co., Ld.

Rosin—
Trieste, 14 pks. Wilson Sons, & Co., Ld.

Saltpetre—
Antwerp, 135 bgs. Wilson, Sons, & Co., Ld.
" 10

Soap—
Bari, 52 cs. Wilson, Sons, & Co., Ld.
New York, 632 pks.

Soda—
Ghent, 100 bgs. Wilson, Sons, & Co., Ld.

Starch—
Amsterdam, 280 cs. Hull & Netherlands S. S. Co.
Antwerp, 50 bgs. Bailey & Leetham, Ld.
Bremen, 1,156 cs. Veltmann & Co.
Ghent, 173 Wilson, Sons & Co., Ld.
Rotterdam, 16 Hull & Netherlands S. S Co

Stearine—
New York, 25 tcs. Wilson, Sons, & Co., Ld.

Tallow—
Antwerp, 30 cks. Wilson, Sons, & Co., Ld.
Dunkirk, 225 "
New York, 90 brls. "

Tartaric Acid—
Rotterdam, 10 cks. Hull & Netherlands S. S. Co.

Waste Salt—
Hamburg, 1,600 bgs. Bailey & Leetham, Ld.
" 1,700

White Lead—
Amsterdam, 62 cks. Hull & Netherlands S. S. Co.
Antwerp, 24 Bailey & Leetham Ld.
Dunkirk, 11 brls. Wilson, Sons, & Co., Ld.
Rotterdam, 120 cks. Hull & Netherlands S S Co.

Wood Pulp—
Boston, 200 brls. Wilson, Sons, & Co. Ld.
Christiania, 2 cs., 625 bls. "
Gothenburg, 923, 2 cs. "
Hango, 274 brls. J. Good & Sons
" 343
Stettin, 41 bls. Wilson, Sons, & Co., Ld.

Zinc White—
Amsterdam, 25 cks. Hull & Netherlands S. S. Co.
Antwerp, 50 brls. Wilson, Sons, & Co., Ld.

GLASGOW.

Week ending March 9th.

Acetone—
Hamburg, 9 cks.

Alizarine—
Rotterdam, 28 cks., 18 brls. J. Rankine & Son

Barium Chloride—
Rotterdam, 12 cks J. Rankine & Son

Barium Sulphate—
Antwerp, 200 bgs.

Barytes—
Rotterdam, 88 cks., 100 bgs. J. Rankine & Son
" 73 pks.

Castor Oil—
Marseilles, 81 cks. 35 cs

Chemicals *(otherwise undescribed)*
Hamburg, 4 cs.

Colours—
Rotterdam, 9 cks., 6 bxs. 1 brl. 1 cs. J. Rankine & Son
" 202 pks.
Hamburg, 90

Copper Pyrites—
Huelva, 2,231 t. Tharsis Co.

Dyestuffs—
Aniline
Rotterdam, 3 cs. J. Rankine & Son
Antwerp, 4 cks.
Amsterdam 1
Aniline Colours
Amsterdam, 1 cs.
Indigo
Rotterdam, 2 chts.
Myrabolams
Bombay, 333 bgs.
Shumac
Marseilles, 60 bgs.

Glucose—
New York, 300 brls.

Glue—
Rotterdam, 40 bgs. J. Rankine & Son
Hamburg, 80

Manure—
Bombay, 1,057 bgs.

Painters' Colours—
Antwerp, 2 cks.

Paraffin Wax—
New York, 162 brls.

Potash—
Hamburg, 19 cks.
Rotterdam, 62

Potassium Prussiate—
Antwerp, 3 cks.

Rosin—
Brunswick, 4,781 brls. W. M. Gemmell & Co.

Saltpetre—
Hamburg, 20 cks., 40 bgs.

Soap—
New York, 2,650 bxs.
Marseilles, 120 cs.
Newport, 100

Soda—
Antwerp 40 cks.

Sodium Nitrate—
Junin, 11,429 bgs.

Starch—
Rotterdam 13 cs. J. Rankine & Son
Antwerp, 10 bgs. 180 cs.
Rotterdam, 8

Stearine—
New York, 17 hhds.
Antwerp, 7 bgs.

Tallow—
Newport, 100 hhds.
Philadelphia, 60 tcs.

Tartar—
Bordeaux, 4 cks.

Tartaric Acid—
Rotterdam, 8 cks. J. Rankine & Son
" 5
Marseilles, 15 cks.

Varnish—
New York, 10 brls.
Antwerp, 2 cks.

Waste Salt—
Hamburg, 258 cks. 100 t., 500 bgs.

White Lead—
Rotterdam, 89 cks. J. Rankine & Son
" 51 pks.

Wood Pulp—
Portland, 248 bls.
Christiania, 408 15 cs.

Zinc Oxide—
New York, 100 brls.
Antwerp, 5 cks.
Hamburg, 15 cs.

Zinc White—
Rotterdam, 25 pks.

TYNE.

Week ending March 4th.

Antimony Ore—
Tampico, 1,199 bgs. Cookson & Co.

Barium Chloride—
Antwerp, 300 bgs Tyne S. S. Co.

Barytes—
Antwerp, 100 bgs. Tyne S. S. Co
Rotterdam, 197 t. "

Colours—
Hamburg, 1 ck. Tyne S. S. Co.
Rotterdam, 1

Lithopone—
Rotterdam, 10 cks. Tyne S. S. Co.

Manganese—
Hamburg, 100 bgs. Tyne S. S. Co.

Phosphates—
Antwerp, 200 bgs. Tyne S. S. Co.

Starch—
Antwerp, 40 cs. Tyne S. S. Co.

Stearine—
Antwerp, 13 bgs. Tyne S. S. Co.

Wood Pulp—
Christiania, 369 bls.
Trondhjem, 30 P. H. Matthies en & Co.

Zinc Oxide—
Antwerp, 10 brls. Tyne S. S. Co.

GOOLE.

Week ending March 1st.

Alizarine—
Rotterdam, 126 cks. 1 cs.

Alkali—
Calais, 8 cks.

Antimony—
Boulogne, 4 cks.

Barytes—
Antwerp, 100 bgs.
Rotterdam, 12 cks., 60 bgs.

Boracic Acid—
Hamburg, 10 cks.

Colours—
Hamburg, 61 cks. 14 cs.

Dyestuffs *(otherwise under.)*—
Amsterdam, 9 cks. 1 cs.
Boulogne, 44
Rotterdam, 499 62 pks.

Farina—
Delfszyhl, 560 bgs.
Hamburg, 100

Glucose—
Calais, 200 bgs.
Hamburg, 189 bgs.

Glue—
Antwerp, 5 cks. 9 bls.
Boulogne, 8

Ochre—
Dunkirk, 153 cks.

Phosphates—
Dunkirk, 800 bgs.

Potash—
Calais, 10 dms.
Dunkirk, 8 cks.

Potassium Carbonate—
Hamburg, 4 cks.

Saltpetre—
Hamburg, 10 cks. 3 pks.

Soda—
Hamburg, 4 dms.

Sodium Silicate—
Rotterdam, 13 cks.

GRIMSBY.

Week ending March 4th.

Barytes—
Antwerp, 100 bgs.
Hamburg, 21 cks.

Caoutchouc—
Antwerp, 2 cs.
Hamburg, 5
Rotterdam, 1

Chemicals *(otherwise undescribed)*
Antwerp, 2 cks 1 cs.
Hamburg, 5 6 pks.
Rotterdam, 1

Colours—
Antwerp, 7 cks. 1 cs. 116 pks.
Hamburg, 49 2 67
Rotterdam, 2, 100 bgs.

Dyestuffs *(otherwise undescribed)*
Dieppe, 5 cks.

Farina—
Hamburg, 200 bgs.

Glue—
Hamburg, 2 cks.

Salt—
Hamburg, 272 bgs.

Zinc Ashes—
Antwerp, 28 cks.
Rotterdam, 10

EXPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending March 8th.

Alkali—
Dunedin, 2 t. 13 c. £89

Alum Waste—
Calcutta 40 t. 2 c. £98

Ammonia—
Hong Kong, 5 cs. £55
Shanghai, 7 78
Yokohama, 10 55
Durban, 10 pks. 30

Ammonia (Anhydrous)—
Sydney, 100 cs. £350

Ammonium Carbonate—
B. Ayres, 5 cs. £18
Paris, 1 t. 9 c. 41

Ammonium Muriate—
Cologne, 10 cks. £58

Ammonium Sulphate—
Honolulu, 336 t. 12 c. £3,500
Ghent, 19 10 195
Hamburg, 30 310
Dunkirk, 351 10 3,600
Bordeaux, 20 210
Grenada, 1 10
Demerara, 51 1 538
Madeira, 20 9 220
Ostend, 582 16 6,023
Bremen, 220 2,335

Arsenic—
Yokohama, 1 t. 10 c. £27
Rockhampton, 1 19

Borax—
Rockhampton, 2 t. 4 c. £34
Townsville, 2 10 46

Carbonic Acid Gas—
Hong Kong, 10 cs. £45

Caustic Soda—
Wanganui, 5 t. 15 c. £48
Philadelphia, 16 15 120
Pt. Elizabeth, 18 5
Sydney, 1 5 23

Chemicals *(otherwise undescribed)*
Brussels, 2 cs. £20
Brisbane, 9 pks. 18
Calcutta, 1 21
St. Lucia, 5 9
Pt. Elizabeth, 3 13
E. London, 4 25
Madras, 2 10
B. Ayres, 11 37
Thursday Is., 20 11
Hiogo, 10 kgs. 13
Hobart, 2 12
Cologne, 12 cks. 21
Durban, 9 105
Dunedin, 6 45
Amsterdam, 6 kgs. 3
Rotterdam, 16 94
New York, 32 12
Melbourne, 5 89 266
Hamburg, 1 8 63
Bombay, 11 63
Reval, 1 54
Boulogne, 3 48

Chloride Lime—
Delagoa Bay, 2 t. £18

Citric Acid—
Amsterdam, 2 kgs. £
Calcutta, 1 c.
Yokohama, 8
Shanghai, 2
Odessa, 12
Durban, 2
Delagoa Bay, 2
Auckland, 3
Rotterdam, 10
Durban, 1
Sydney, 3
Brussels, 2 cs.

Coal Products—
Alizarine
Dunedin, 11 cks. £1
Lyttelton, 8 pks. 1
Aniline
Oamaru, 3 cks. £
Dunedin, 1 bx.
Anthracene
Cologne, 240 cks. £

Benzine
E. London, 10 dms. £8
Shanghai, 5 8
Benzoline
E. London, 10 dms. £8
Carbolic Acid
Pt. Elizabeth, 5 cs. £19
Hiogo, 25 kgs. 76
Cologne 96 cks. 445
Philadelphia, 2 dms. 17
Coal Tar Dyes
Boston, 3 cks. £75
Boulogne, 1 10
Hamburg, 1 cs. 13
Creosote
Dieppe, 23,500 galls £123
Creosote Salts
Antwerp, 572 bgs. £90
Gasoline
E. London, 8 dms. £6
Naphtha
Boulogne, 2 cks. £7
Naphthaline
Hamburg, 7 cks. £1 1
New York, 351 290
Pitch
Chatenay, 1,150 t. £1,440
Hochfeld 347 417
Philadelphia, 250 cks. 86
Tar
Honolulu, 30 cks. £40
Trinidad, 10 rnlts. 8
Hamburg, 250 brls. 114

Copper Sulphate—
Invercargil, 15 c. £14
Treport, 5 t. 1 91
Odessa, 43 945
Naples, 46 5 1,131
Bordeaux, 158 15 3,825
Brussels, 5 121
Paris, 174 4,209

Cream of Tartar—
Adelaide, 5 c. £19
Pt. Chalmers, 5 19
Perth, 5 pks. 25
Launceston, 5 19
Hobart, 15 61
Rockhampton, 2 t. 161

Disinfectants—
Shanghai, 18 cs. £31
Hamburg, 50 cks. 24 pks. 210
Calcutta, 10 46
Melbourne, 10 brls. 13
Delagoa Bay, 50 demijohns 63
Paris, 12 cks. 15
Calcutta, 100 45
Cape Town, 3 cs. 17
E. London 1 26
Pt. Elizabeth, 40 50 dms. 144
Sydney, 4 6 pks. 41

Glycerine—
Yokohama, 2 t. £96

Manure—
Lavon, 40 t. 3 c. £350
Cherbourg, 138 386
Malaga, 19 10 145
Madeira, 11 4 72
Santander, 15 15 100
Quimper, 78 19 189
Durban, 10 4 75

Nitric Acid—
Shanghai, 10 cs. £12
Channel Is., 21 cbys. 42

Oxalic Acid—
Yokohama 1 t. £28

Phosphorus—
Tampico, 2 cs. £20

Potash—
Christchurch 5 c. £21

Potassium Bichromate—
Dunedin, 1 t. 6 c. £50

Potassium Chlorate—
Tampico, 10 c. £18

Potassium Cyanide—
Hong Hong, 3 c. £12
Normanton, 1 t. 10 cs. 242
Charters Towers, 69 754
E. London, 15 1,601
Shanghai, 8 c. —
Durban. 3 322
Townsville, 2 5 228
Delagoa Bay, 20 1,900

Potassium Prussiate—
Yokohama. 1 t. 15 c. £11 8
Hong Kong, 1 6 0

Potassium Sulphate—
Colombo, 2 t. 13 c. £28

Saltpetre—
Colombo, 13 c. £12
Bahia, 5 t. 11 124
Oporto, 11 5 214
Santos, 1 19 45
Wellington, 10 10
Rio de Janeiro, 2 4 49
Santos. 4 5 97

Sheep Dip—
B. Ayres, 90 cs. £225
London, 1 t. 3 c. 11
Malta, 6 7

Soda—
Colombo, 1 t. 12 c. £5
B. Ayres, 2 3 79
Toronto, 5 4 123

Soda Ash—
Dunedin, 2 t. 3 c. £8

Soda Crystals—
Cape Town, 1 t. 13 c. £5

Sodium Bicarbonate—
Rockhampton, 2 t. 3 c. £12
Rosario, 12 5
Hobart, 10 7
Gibraltar, 1 8
Sydney, 2 9

Sodium Hyposulphite—
Hong Kong, 1 t. £7
Adelaide, 3 6 c. 19
Dunedin, 2 3 60

Sodium Nitrate—
Grenada, 8 t. 4 c. £69

Sodium Prussiate—
Antwerp, 5 t. £233

Strychnine—
Rockhampton, 10 cs. £99

Sulphur—
Lisbon, 450 brls. £313

Sulphuric Acid—
B. Ayres, 8 cs. £13
Pt. Elizabeth, 3 t. 7 c. 21
Singapore, 5 6 32
Aden, 1 17

Tartaric Acid—
E. London. 2 cs. £12
Shanghai, 2 c. 11
Hobart, 1 7
Yokohama. 2 t. 11 280
Cape Town, 2 11
Dunedin, 3 17

LIVERPOOL.

Week ending March 8th.

Acetate of Lime—
Santos, 8 c. 1 q. £3

Acetic Acid—
Copenhagen, 10 c. £11
Bombay, 1 t. 14 26

Alum—
Adelaide, 1 t. £5
Piræus, 2 15 c. 15
Dedeagatch, 1 5 6
Salonica, 7 7 37
Porto Lagos, 4 22
Santos, 5 3 c. 2
Melbourne, 1 2 1 6

Ammonia—
Cadiz, 1 t. 7 c. £27

Ammonium Carbonate—
Callao, 2 c. 2 q. £7
Genoa, 1 t. 15 48
Corunna, 4 1 6
Reval, 5 129
Antwerp, 2 3
Toronto, 1 6 32
Gothenburg, 16 24

Ammonium Muriate—
Barcelona, 2 t. 16 c. £50
Seville, 1 1 19
Hiogo, 2 10 43
Melbourne, 1 17

Ammonium Sulphate—
Gandia, 116 t. £1,212
Boston, 10 115
Cartagena, 20 12 20
Genoa, 10 94
Kingston, Ja., 15 155
Portland, 7 72
Bilbao, 10 1 3q. 102
Valencia, 390 4 1 4,093
Spain, 127 17 1 1,280
Cullera, 230 15 3 2,388
Venice, 10 15 173
Palermo, 10 106
Messina, 5 3 55
Santa Cruz, 20 10 2 5
Bordeaux. 15 2 158

Amorph. Phosph rus—
Hiogo, 130 cs. £1,203

Arsenic—
Maranham, 19 c. 3q. £18

Barium Sulpho Cyanide—
Santos, 8 c. £15

Basic Slag—
Las Palmas, 5 t. £11

Bleaching Powder—
Baltimore, 94 cks.
Bombay, 25 6 cs.
Boston, 767
Fiume, 16
Muncie, 67
Nantes, 18
New York, 93
Pasages, 29
Philadelphia, 52
Rio de Janeiro, 12
Rotterdam, 150
Spring Grove, 115
Trieste, 57
Yokohama, 25 bxs. 25 brls

Borax—
Hamburg, 7 t. 1 c. 2 q. £114
Rotterdam, 3 12 3 60
Kingston. Ja., 5 3 5
Toronto, 12 10 3 213
Victoria, B.C., 2 4 37
Adelaide, 10 8
Havana, 1 17 86
Halifax, 1 1 16

Calcium Chloride—
Alexandria, 1 t. 11 c. £7
Shanghai, 2 5
Brisbane, 4 1 9
Napier, 9 5 25
Wellington, 1 2
Sydney, 38 4 1 q. 86

Carbolic Acid—
Rotterdam, 1 t. 11 c. 1 q. £41
Odessa, 1 14 62
Para. 5 1 7
Genoa 4 3 15
Portland, M., 1 5 84
Amsterdam, 4 17 2 110
Madras, 1 10 10
New York, 20 cks. 15 3 301

Castor Oil—
Accra, 9 cs.

Caustic Potash—
Sydney, 1 t. £30

Caustic Soda—
Ancona, 18 dms
Antwerp, 17
Bahia, 60
Barcelona, 174 130 cks.
Bari, 271
B. Ayres, 14
Calcutta, 105
Cartagena, 38 10
Corunna, 28 brls.
Dunedin, 39 10 bxs.
E. London, 5
Fremantle, 50
Galatz, 61
Genoa. 261
Halifax, 15
Hiogo. 399
Karachi. 31
La Guayra, 6
Leghorn. 170
Lisbon, 52
Malaga, 26 80 pks.
Melbourne, 96
Monterey, 30
M. Video. 125
Nagasaki, 200
Oporto, 75
Parnahyba, 8
Piræus, 100
Porto Alegre, 60
Rangoon, 77
Rio de Janeiro 35
Rotterdam, 115
Sao Paulo, 15
Savanilla, 25
Seville, 132 19 brls.
Shanghai, 154 500 kgs.
Sourabaya, 23
Sousse, 50
Sydney, 12
Tampico, 40
Trieste, 30
Tunis, 20
Vancouver, 60
Venice, 80
Vera Cruz, 87
Volo, 50
Yokohama, 250

Chemicals *(otherwise undescribed)*
Madras, 18 t. 3 c. £1,845
Delagoa Bay, 3 310
Vera Cruz, 1 100
Rio de Janeiro 3 310
Antwerp, 6 1 q. 12
Calcutta, 15 12 2 274
New York, 15 3 414
Odessa, 2 59
Hamburg, 1 11 41
B. Ayres, 5 15 10
Genoa, 4 17 87
Boston, 195
Brisbane, 1 10 25
Melbourne, 3 48
Dunedin, 10 8
Barcelona, 10 2 159
Sydney, 130 kgs. 107

China Clay—
Baltimore, 625 cks.
Bordeaux, 20
Boston, 1,004
Calcutta, 30 t.
Lisbon. 20 bgs.
Maranham, 30 cks.
Oporto, 20
Pernambuco, 40
Philadelphia, 200
Portland, M., 137 t. 11 c. / 200 cks.
Rio de Janeiro, 72 40 brls.

Citric Acid—
Vera Cruz, 1 c. £6
Algoa Bay, 1 1 q. 7

Coal Products—
Alizarine
Lisbon. 1 ck.
Aniline Colour
Canada, 6 kgs.
New York, 2 cks. 2
Aniline Salt
Barcelona, 20 brls.
Boston, 60 cs.
Larnaca, 1 ck.
Lisbon, 2 pns.
Smyrna, 7 cks.
Valleyfield, 60
Coal Tar
Lagos, 10 brls.
Sulina, 48 t. 19 c.
Creosote Oil
Bordeaux, 245 cks. 50 brls.
B. Ayres, 20 dms.
Lisbon, 100
Creosote Salts
Dunkirk 313 bgs.
Pitch
Antwerp, 171 t.
Avilles. 201 6 c.
Tar
Manaos, 4 cks.

Copperas—
Alexandretta, 6 t. 2 c. 1 q. £11
Valparaiso, 12 17 26
Vera Cruz, 3 3 6

Copper Sulphate—
Cette, 257 t. 14 c. 2q. £5,853
Leghorn, 80 12 3 1,666
Venice, 272 1 5,439
Lisbon, 89 2 1,677
Nantes, 26 15 2 576
Ancona, 102 8 3 2,040
Genoa, 302 12 6,920
Fiume, 19 15 341
Bari, 46 3 880
Naples, 43 12 2 847
Bordeaux. 388 8 2 7,871
Cephalonia, 12 11 2 340
Trieste, 49 6 1 1,025
Galatz, 9 9 187
Braila. 5 8 106
Ghent, 5 4 112
Rouen, 25 2 585
Seville, 4 2 1 92
Rotterdam, 1 19 3 39
Brindisi. 9 11 2 217

Disinfectants—
Singapore. 1 c. £5

Dried Blood—
Dunkirk, 50 t. 10 c. £374

Glycerine—
M. Video, 16 c. £30
Hamburg. 24 t. 13 2q. 1,012
Newport News, 55 4 2 1,632
Genoa, 1 2 47

Guano
Malaga 19 t. 18 c. £140
Las Palmas, 3 1 21

Gypsum—
Melbourne, 3 t. 8 c. £9
New York, 28 74
Ibrail, 140 cks. / Galatz, 110 22

Lead Acetate—
Calcutta, 10 kgs.

Lead Nitrate—
Kingston, Ja., 2 t. 2 t. £36

Magnesia—
Barcelona, 60 cs.

Magnesium Chloride—
Nantes, 5 t. 6 c. 2 q. £11

Magnesium Sulphate—
Corunna, 4 brls.
Pernambuco, 45 bgs.

Manganese Oxide—
Rotterdam, 5 c. 2 q. £5

Manure—
Gd. Canary, 9 t. 6 c. £46

Paint—
Boston, 420 bgs.
Braila, 170 pks.
B. Ayres, 22
Calcutta, 24 dms.
Callao, 151 kgs.
Cartagena, 40 4 cs.
Eten, 5 cks.
Ferrol, 1
Havana, 8
Islandia, 15
Kingston, 200
Malta, 2
Manaos, 2
Maracaibo, 125
M. Video, 10
Opobo, 9 4
Pacasmayo, 20
Para, 13
Ponce, 6
Puerto Cabello, 2
St. John's, Nf'd, 34
Shanghai, 355 8
Sierra Leone, 31 dms.
Teneriffe, 2 cks.
Torreon, 6

Painters' Colours—
B. Ayres, 12 pks.
Calcutta, 20 cs.
Callao, 40
Forcados, 73
Hong Kong, 20 cks.
Kinston, 2 brls.
La Libertad, 3
Lima, 10 cs.
Little Popo, 2
Manaos, 5
Mayaquez, 3
Melbourne, 20 dms
New York, 2 kgs.
Para, 25 9 bls.
Parnahyba, 3 cks.
Pernambuco, 72
Ponce, 3
Port Pirie, 1 294 kgs. 13
Rio de Janeiro, 15 brls.
St. Thomas, 4
Seville, 1
Sydney, 3
Valparaiso, 10 pks.
Vera Cruz, 4 cs.
Zante, 3 brls.

Paraffin Wax—
Callao, 70 bgs.
Genoa, 125 10 cks.
Palermo, 40
Patras, 50
Venice, 10
Vera Cruz, 5
Volo, 10 cs.

Phosphates—
Hamburg, 50 t. 7 c. 2 q. £200

Phosphorus—
B. Ayres, 10 c. £84
Osaka, 5 cs. 42
Shanghai, 14 115

Potassium Bicarbonate—
Barcelona, 10 t. 1 c. 1 q. £305
Pernambuco, 10 1 20
Piræus, 2 75

Potassium Bichromate—
Antwerp, 7 c. 1 q. £11

Potassium Carbonate—
New York, 20 t. 8 c. £367

Potassium Chlorate—
Copenhagen, 12 c. £18
Hamburg, 7 t. 18 251
Vera Cruz, 2 2 63

Potassium Cyanide—
Taltal, 2 t. £233

Potassium Prussiate—
Santos, 5 c. £18

Rock Salt—
Antwerp, 50 t.
B. Ayres, 20
Ghent, 50
Hamburg, 35
Kingston, 5
Newcastle, 150
Sydney, 523

Salammoniac—
Alexandretta, 2 t. £64
Alexandria, 1 35
Toronto, 5 c. 1 q. 8
Trieste, 1 32
Salonica, 2 63

Salt—
Adelaide, 20 t.
Alexandria, 100
Amherst, 16
Antwerp, 125
Axim, 77 10 c.
Baltimore, 230
Barbadoes, 116 13
Belize, 311
Berracoe, 1,600 bgs.
Boston, 210 t.
B. Ayres, 40
Calcutta, 4,088
Canada, 100
C. C. Castle, 18 15
Cape Town, 60
Chicago, 200
Christiania, 15
Conakry, 61 5
Degama, 156
E. London, 62 9
Egwanga, 40
Forcados, 50 cks.
Ghent, 100
Hamburg, 14 15
Hamilton, 60
Havana, 50
Kingston, 5 15
Newcastle, N.S.W., 95
Newfairwater, 14
New York, 10
Nuevitas, 50
Portland, Me., 100
Rangoon, 733
Rosario, 6 1
St. John, N.B., 220 3
St. John's, 17
Sandy Point, 15
Sagua la Grande, 8 18
Sinoe, 3 10
South St. Paul, 40
Sydney, 2 19
Trinidad, 40 17
Winnebah, 20 sks.

Salt Cake—
Antwerp, 120 t. £155
Baltimore, 90 11 c. 152
Philadelphia, 38 61

Saltpetre—
Bahia, 3 t. 11 c. 2 q. £70
Boca, 10 11
Maranham, 1 3 2 26
Para, 3 34
Parnahyba, 10 13
Pernambuco, 5 128

Sheep Dip—
B. Ayres, { 3 cks. / 500 cs. £1,066 / 10 t. 19 c. 3 q.
Punta Arenas, 600 dms. 300

Soap—
Accra, 130 bxs.
Algoa Bay, 600 100 cs.
Antwerp, 130
Berracoe, 50
Boca del Rama, 500
Bombay, 1,301 40
Brussels, 1,968
B. Ayres, 20
Buluwayo, 10
Calcutta, 28 10 bars
Callao, 15 1
Cape Town, 20
Cartagena, 2
Christiania, 70 210
Delagoa Bay, 1,360 120
Durban, 250
E. London, 50 10
Elmina, 400
Ghent, 1 brl.
Gibraltar, 575
Gd. Bassam, 20
Guayaquil, 3 cs.
Hamburg, 6
Havana, 10
Iquitos, 900
Johan'esburg, 1,007 360
Lagos, 1,702
Madras, 10
Manacs, 770
Matadi, 5
Mauritius, 6,481
Menado, 1,000
M. Video, 1
Montreal, 1
Natal, 10
New York, 56
Old Calabar, 2,324
Opobo, 1,120
Para, 1,200 1
Penang, 400
Pt. Elizabeth, 650
Pt. Natal, 300 115
Pt. Said, 80
Pretoria, 310 8 bdls.
Rangoon, 9 51
Rotterdam, 359
St. John's 5
St. John's, N'fd., 21
St. Louis, 20
Salonica, 2 brls.
Savanilla, 3
Shanghai, 4,096 40 dms.
Sierra Leone, 190
Singapore, 1,650
Sinoe, 50
Sydney, 4,000 cs. 19 crts.
Taltal, 100 2
Toronto, 500
Truxillo, 30 bdls.
Yokohama, 2
Zanzibar, 100

Soda—
Pernambuco, 14 cks.

Soda Ash—
Amsterdam, 200 bgs.
Antwerp, 67
Barcelona, 20 cks.
Boston, 80 25 tcs. 30
Bombay, 2 kgs. 31
Brantford, 86 bgs.
B. Ayres, 175
Calcutta, 115
Callao, 40
Christiania, 40
Corfu, 25 brls.
Genoa, 600
Ghent, 134
Gothenburg, 12
Hiogo, 81
Itea, 30
Johannesburg, 80 kgs.
Kobe, 100
Maranham, 193
M. Video, 50
New York, 44 tcs
Oporto, 6
Philadelphia, 108 20
Patras, 14 brls.
Piræus, 50
Rotterdam, 1,138 bgs, 7 bls. 2
St. John, N.B., 25
Skien, 50
Smyrna, 50
Sourabaya, 100
Sydney, 235
Tetuan, 200
Toronto, 307
Trieste, 100
Vancouver, 30
Venice, 200 9
Vera Cruz, 10
Volo, 10
Yokohama, 330

Soda Crystals—
Batavia, 10 kgs.
Bombay, 200
Calamata, 34 cks.
Gibraltar, 50
M. Video, 20 brls.
New York, 140
Rangoon, 25
Sandy Point, 20
Singapore, 30

Sodium Acetate—
Vera Cruz, 2 cks.

Sodium Bicarbonate—
Algoa Bay, 10 bgs.
Alicante, 75 kgs.
Amherst, 15 bgs.
Amsterdam, 50 kgs.
Ancona, 20
Antwerp, 37
Barcelona, 75
Bombay, 531 13 cks.
Cairo, 20
Cape Town, 20 bgs.
Delagoa Bay, 10 kgs.
Dunedin, 100
Galatz, { 20 / 20 bgs.
Genoa, 32
Gibraltar, 10
Gijon, 10 kgs.
Halifax, 10 bgs.
Heidelburg, 10
Hong Kong, 24 kgs.
Ibrail, 34
Johannesburg, 40
Karachi, 690
Lisbon, 30
Madras, 50
Malta, 19 dms.
Naples, 103
Odessa, 50 300
Pt. Natal, 45
Rangoon, { 15 bgs. / 50 kgs. 4 cks.
Rotterdam, 65
Seville, 180 brls.
Shanghai, 507
Sydney, 595 20
Trinidad, 20
Vancouver, 75
Vera Cruz, 102
Victoria, B. C., 95
W. Indies, 4 6
Yokohama, 350

Sodium Chlorate—
New York, 100 kgs.

Sodium Hyposulphite—
Seville, 20 crbys.
Valencia, 7 cks.

Sodium Silicate—
Canterbury, 10 brls.
Corunna, 4

Sodium Sulphate—
Callao, 8 cks.
Corunna, 1 brl.
Hamburg, 8
Piræus, 100 bgs.

Starch—
Pernambuco, 44 bgs.
St. John's, N'fd., 15 cs.

Sulphur—
Boca, 17 c. 3 q. £7
Boston, 25 t. 1 107
Halifax, 4 19
Newcastle, 1 10 12
Para, 15 5
Pernambuco, 2 17 19

Sulphuric Acid—
Callao, 11 t. 10 c. £16
Para, 8 3 q. 6
Rio de Janeiro, 1 19 14

Superphosphates—
Cullera, 320 t. 4 c. 2 q. £661
Gd. Canary, 5 24
Las Palmas, 5 18
Santander, 300 930

Tannic Ac'd—
Portland, Me., 2 c. £6

Tin Crystals—
Santos, 3 c. £11

Varnish—
B. Ayres, 10 dms.
Calcutta, 25 cs.
Catania, 1
Genoa, 11 j. s.
Ibrail, 12 brls. 52 dms.
Lagos, 2
Piræus, 2
Santiago, 7
Savanilla, 4

Venetian Red—
Chicago, { 10 cks. / 125 brls.
Genoa, 46
Philadelphia, 40 kgs. 50

White Lead—
Callao, 40 kgs.
Lisbon, 2 brls.
Port Pirie, { 120 / 1 ck.
Rosario, 2

Zinc Chloride—
Bombay, 11 t. 19 c. 2 q. £174

MANCHESTER.

Week ending March 8th.

Alkali—
Beyrout, 18 cks.

Alum—
Bombay, 98 brls.

Ammonia (Anhydrous)—
Belgium, 6 cs.

Beta Naphthol—
Holland, 2 kgs.

Caustic Soda—
Alexandria, 1 ck. 9 dms.
Beyrout, 40
Jaffa, 80
Tripoli, B., 14

Chemicals (*otherwise unenumerated*)
Aleppo, 50 brls.
Alexandria, 100

China Clay—
Bombay, 2 brls.

Coal Products—
Aniline Colours
Belgium, 2 pks.
Germany, 4 kgs.
Aniline Oil
Belgium, 4 dms.
France, 5
Carbolic Acid
France, 201 btls.
Germany, 75 cks.
Pitch
Belgium, 451 t. 5 c.

Colours—
Jaffa, { 4 cks. / 1 kg. 10 cs.

Cottonseed Oil—
Larnaca, 2 brls.

Disinfectants—
Bombay, 50 cks.

Glue—
France, 1 ck.

Glycerine—
France, 10 dms.
Lead Acetate—
Alexandria, 2 cks.
Linseed Oil—
Beyrout, 8 brls.
Paint—
Beyrout, 3 cks. 60 dms.
Paraffin Wax—
Beyrout, 6 cs.
Salammoniac—
Beyrout, 5 brls.
Soap—
Bombay, 5 cs.
Sodium Naphthionate—
Germany, 12 cks.
Holland, 6
Russia, 28 bgs
Starch—
Bombay, 1 bg.
Tallow—
France, 3 kgs.
Holland, 15 cks.
Tan Extract—
France, 14 cs.
Varnish—
Bombay, 12 dms.
Venetian Red—
Jaffa, 3 cks.
Zinc Chloride—
Bombay, 6 cks.

HULL.

Week ending March 4th.

Alkali—
Rotterdam, 1 ck.
Ammonium Carbonate—
Danzig, 1 t. 11 c.
Ammonium Sulphate—
Dunkirk, 200 bgs.
Genoa, 296
Leghorn, 91
Marseilles, 421
Rotterdam, 500
Bleaching Powder—
Danzig, 60 cks.
Odessa, 15
Caustic Soda—
Genoa, 254 dms.
Hango, 104
Chemicals (*otherwise undescribed*)
Alexandria, 12 pks.
Amsterdam, 22 cks.
Constantinople, 25
Copenhagen, 18 2 cs.
Drontheim, 3
Ghent, 144
Gothenburg, 5
Hamburg, 20 5
Leghorn, 100
Naples, 7
Odessa, 492
Rotterdam, 3 82
Stettin, 30
Cottonseed Oil—
Amsterdam, 12 t. 5 c.
Antwerp, 20 2
Copenhagen, 3 11
Drontheim, 17
Dunkirk, 6 7
Genoa, 2 19
Ghent, 10
Gothenburg, 10 2
Hamburg, 8 17
Harlingen, 18
Rotterdam, 25 12
Stettin, 18
Dyestuffs (*otherwise undescribed*)
Bergen, 4 cs.
Genoa, 2 cks. 1
Gothenburg, 4
Glue—
Drontheim, 8 bls.
Hamburg, 4 cks. 5
Guano—
Dunkirk, 150 t.
Linseed Oil—
Amsterdam, 9 t. 15 c.
Antwerp, 3 11
Bergen, 7
Boston, 1 5
Christiania, 3 17
Christiansund, 1 16
Copenhagen, 3 10
Drontheim, 5 2
Hamburg, 1 1
Rotterdam, 3 18
Manure—
Dunkirk, { 1,600 bgs. 50 t.
Genoa, 100
Stettin, 1
Paint—
Antwerp, 4 cks.
Painters' Colours—
Amsterdam, 6 cks. 2 cs.
Antwerp, 60 1 120 pks.
Boston, 10 17 dms.
Copenhagen, 25 6
Drontheim, 10 214
Genoa, 4
Ghent, 3 29
Gothenburg, 2
Hamburg, 5
Hango, 1
Harlingen, 200 bgs.
Leghorn, 11 cks.
Libau, 1
Marseilles, 3
Odessa, 60
Rotteriam, 9 1 5
Stavanger, 2
Pitch—
Antwerp, 273 t.
Soap—
Christiania, 1 cs.
Drontheim, 1
Rotterdam, 1
Tallow—
Hango, 40 cks.
Tar—
Amsterdam, 6 cks.
Hamburg, 5
Rotterdam, 9
Stettin, 5
Varnish—
Amsterdam, 1 ck.
Antwerp, 1 cs.
Drontheim, 1
Ghent, 2 1

GLASGOW.

Week ending March 9th.

Ammonium Carbonate—
Christiania, £45
Ammonium Sulphate—
Amsterdam, 54 t. 10 c. 1 q.
Genoa, 45 12
Italy, 72 3 2
Kobe, 50
Penang, 12 12 1
Rotterdam, 50 13 3
Bleaching Powder—
Bombay, 2 t. 12 c.
Calcutta, £200
Boracic Acid—
Antwerp, £47
Brisbane, 27 10s.
Borax—
Antwerp, £32
Rotterdam, 73
Carbolic Acid—
Rotterdam. £100
Chemicals (*otherwise undescribed*)
Rotterdam, £6
Coal Products—
Coal Tar
Boston, £55
Calcutta, 360 10s.
Madras, 237 15
Rangoon, 80
Creosote Oil
Boston, £180
Singapore, 54 18s.
Naphtha
Christiania, £4 5s.
Pitch
Danzig, 113 t. 3 c.
Italy, £320
Oporto, 390
Tar
Christiania, £1 1s.
Dyestuffs—
Dyewood
Portugal, £64 19s.
Logwood
Portugal, £77
Glucose—
Christiania, 2 t. 1 c. 3 q.
Glue—
Shanghai, £270
Lead Acetate—
Bombay, £87
Lead Nitrate—
Italy, £22
Linseed Oil—
Colombo, 16 c.
Shanghai, 2 t. 13 1 q.
Litharge—
Bombay, £37
Logwood Extract—
Victoria, £95 17s.
Manganese—
Antwerp, £105
Nitric Acid—
Madras, £23
Paint—
Bombay, £47
Calcutta, 225
Christiania, 5
Colombo, 126
Madras, 49 10s.
Penang, 23
Rangoon, 20 10
Shanghai, 129
Painters' Colours—
Algoa Bay, £29 4s.
Brisbane, 339
Calcutta, 26 15
Johannesburg, 52
Manila, 60
Melbourne, 85 10
Natal, 102
Rockhampton, 36
Singapore, 71 5
Sydney, 185
Paraffin Wax—
Christiania, £14
Gijon, 117
Italy, 1,303
Leghorn, 109
Naples, 90
Palermo, 20
Pasages, 49
Seville, 30
Sicily, 89
Vigo, 30
Potassium Bicarbonate—
Bombay, £192
Christiania, 34
Madras, 70
Oporto, 50
Paris, 571
Rotterdam, 36
Rouen, 89
Potassium Cyanide—
Delagoa Bay, £244
Melbourne, 200
Sydney, 300
Quebracho Extract—
Belgium, £127
Red Lead—
Rotterdam, £92
St. John, N.B., 33
Sheep Dip—
B. Ayres, £125
Soap—
Jamaica, 2 t. 10 c.
Johannesburg, 3 5
New York, 10
Singapore, 3 17 2 q.
Sodium Bicarbonate—
Bombay, 1 t. 1 q.
Genoa, 206 10 c.
Rouen, 12 9 3
Starch—
Rotterdam, £13
Sulphur—
Calcutta, £35
Sulphuric Acid—
Colombo, £71
Madras, 68 5s.
Penang, 20
Rangoon, 357 10
Yarnish—
Shanghai, £60
White and Red Lead—
Santos, £44
Zinc White—
Sydney, 2 t.

TYNE.

Week ending March 4th.

Alkali—
Amsterdam, 2 t. 18 c. 3 q.
Copenhagen, 1 15
Halmstadt, 3 6 2
Rotterdam, 5 1 1
Antimony—
Hamburg, 3 t.
Barium Binoxide—
Antwerp, 10 t. 11 c. 2 q.
Hamburg, 5 6 3
Barium Carbonate—
Rotterdam, 10 c.
Bleaching Powder—
Amsterdam, 29 t. 14 c. 1 q.
Antwerp, 1 8 1
Drontheim, 9 13 1
Gothenburg, 70 14 3
Halmstadt 17 9 3
San Francisco, 32 17 1
Caustic Soda—
Amsterdam, 1 t. 10 c.
Antwerp, 19 4 3 q.
Christiania, 2 18
Copenhagen, 6 8 3
Gothenburg, 10 3 1
Fluor Spar—
Gothenburg, 52 t. 10 c.
Hydrochloric Ac'd—
Ergasteria, 1 t. 4 c. 1 q.
Linseed Oil—
Ergasteria, 4 c. 1 q.
Litharge—
Amsterdam, 1 t. 9 c.
Magnesia—
Hamburg, 1 t. 16 c. 2 q.
Odense, 10
Red Lead—
Aarhuus, 1 t. 7 c. 3 q.
Amsterdam, 16 1
Christiansand, 1 2 3
Copenhagen, 2 9
Ergasteria, 12 2
Hamburg, 23 9 2
Stavanger, 3
Soda—
Amsterdam, 36 t.
Halmstadt, 25 2 c. 3 q.
Soda Ash—
Antwerp, 3 t. 6 c. 1 q.
Copenhagen, 9 3 3
Sodium Sulphate—
Antwerp, 100 t.
Sodium Sulphide—
Antwerp, 5 t. 2 c. 3 q.
Sulphur—
Gothenburg, 60 t.
Molde, 1

GOOLE.

Week ending March 1st.

Benzol—
Rotterdam, 75 cks.
Caoutchouc—
Boulogne, 4 cks.
Chemicals (*otherwise undescribed*)
Antwerp, 9 cks.
Boulogne, 13
Coal Products (*otherwise undes.*)—
Amsterdam, 123 cks.
Boulogne, 1 2 cs.
Ghent, 4
Hamburg, 11 1
Rotterdam, 20 1
Creosote—
Kuysua, 1,600 cks.
Manure—
Dunkirk, 300 bgs.
Painters' Colours—
Amsterdam, 1 cs.
Calais, 1
Pitch—
Antwerp, 677 t.

GRIMSBY.

Week ending March 4th.

Alkali—
Dieppe, 2 cks. 4 cs.
Caoutchouc—
Malmo, 4 cs. 2 pks.
Chemicals (*otherwise undescribed*)
Dieppe, 6 cs.
Gothenburg, 1
Hamburg, 6
Malmo, 12 cks.
Coal Products (*otherwise undes.*)—
Dieppe, { 11 kgs. 113 cks. 4 pks.
Hamburg, 10 btls.
Colours—
Malmo, 2 cks.
Painters' Colours—
Antwerp, 5 cks. 1 cs. 1 pk.
Hamburg, 5
Rotterdam, 5

PRICES CURRENT. WEDNESDAY, Mar. 15, 1899.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9	&	8/3
,, Glacial .. .. ,,			35/-
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¼
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	9
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	0	11½
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	0
Arsenic, white powdered .. .. nett per ton	16	12	6
Alum, loose lump .. .. ,,	4	5	0
Alumina Sulphate (pure) .. .. ,,	3	15	0
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¼ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2¾
,, = 24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	19	0	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. per ton	10	11	3
,, ,, (grey) Hull .. .. ,,	10	11	3
Aniline Oil (pure) .. .. per lb.	0	0	4¾
Aniline Salt ,, ... ,,	0	0	4¼
Antimony .. .. per ton	39	0	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	4	10	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	5	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizatine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	8
,, 50/90 ,, ... ,,	0	0	8
Carbolic Acid (crude 60°) .. .. ,,	0	1	11½
,, (crystallised 40°) .. .. .. per lb.	0	0	6¾
,, (liquid 95/97%) .. .. .. per gallon	0	1	0
Creosote (ordinary) .. .. ,,	0	0	3½
,, (filtered for Lucigen light) .. .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	2	12	6
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	3	0
Solvent Naphtha, 90% at 160° .. .. per gallon	0	1	1
Copper .. .. per ton	68	15	0
,, Sulphate .. .. ,,	24	0	0
,, Oxide (copper scales) .. .. ,,	54	0	0
Glycerine (crude) 80% .. .. ,,	24	0	0
,, (distilled S.G. 1250°) .. .. ,,	48	10	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	2	6
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	15	7	6
,, Litharge Flake (ex ship) .. .. ,,	16	0	0
,, Acetate (white ,,) .. .. ,,	26	0	0
,, ,, (brown ,,) .. .. ,,	18	0	0
,, Carbonate (white lead) pure .. .. .. ,,	18	10	0
,, ... ,,	22	10	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	0	0
,, ,, (grey) (ex ship) .. .. ,,	7	17	6
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton	9	10	0
,, Sulphate (Epsom Salts) .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	15	10	0
,, Borate .. .. per cwt.	2	0	0
,, Ore, 70% .. .. per ton	3	10	0
Methylated Spirit, 61° O.P .. .. per gallon	0	2	0
Naphtha (Wood), Solvent .. .. ,,	0	3	0
,, ,, Miscible, 60° O.P. .. .. .. ,,	0	3	10
Oils:—			
Cotton-seed .. .. per ton	17	0	0
Linseed .. .. ,	19	5	0
Stearine .. .. ,,	26	0	0
Phosphorus (Yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	0	0
,, Chlorate .. .. per lb.	0	0	3½
,, Cyanide, 98 % .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) 90 % .. .. per ton	22	0	0
,, ,, ,, 75/80 % .. .. ,,	17	15	0
,, Potash Hydrate Liquid 50 % .. .. ,,	10	10	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	2	12	6
,, Prussiate Yellow .. .. per lb.	0	0	7½
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	0
,, Muriate, 80 % ,, ... ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3½
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % .. nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	5	0
,, ,, (Carb. Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Soda Crystals) .. .. .. ,, ,, (f.o.r. w'ks.)	2	10	0
,, Acetate (ex-ship) .. .. ,,	12	10	0
,, Arseniate, 45 % .. .. ,,	13	0	0
,, Chlorate .. .. per lb.	0	0	3¾
,, Borate (Borax) .. .. nett per ton	16	0	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton (10 ton lots)	7	12	6
,, ,, (74 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	0	0
,, ,, (60 % Caustic Soda) .. ,, ,, (10 ton lots)	6	0	0
,, ,, (pure liquor 90° Tw.) .. ,, ,, (10 ton lots)	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate (cwt. kegs) .. .. ,,	6	15	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25 % .. .. ,,	16	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	8	0
,, Nitrite, 98 % .. .. per ton	26	0	0
,, Phosphate .. .. ,,	10	7	6
,, Prussiate .. .. per lb.	0	0	5½
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	10	0
,, Stannate, 40 % .. .. per cwt.	3	10	0
,, Sulphate (Salt-cake) .. .. per ton	1	9	0
,, ,, (Glauber's Salts .. .. .. ,,	1	10	0
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	4	15	0
Strontium Hydrate, 100 % .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. .. per lb.	0	0	5¾
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton	7	0	0
,, (Roll Brimstone) .. .. ,,	6	0	0
,, Brimstone: Best quality .. .. ,,	4	12	6
Superphosphate of Lime (26 %) .. .. ,,	2	10	0
Tallow .. .. ,,	24	0	0
Tin Crystals .. .. per lb.	0	0	7
,, English Ingots .. .. per ton	111	0	0
Zinc (Spelter) .. .. ,,	27	0	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	7	10	0
,, Sulphate, Crystal .. .. ,,	7	5	0

THE

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AND

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LATE ADVERTISEMENTS.

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MATCH-MAKING AND PHOSPHORUS POISONING.

IT is pleasing to note the commendable celerity with which the reports of Professors Thorpe, Oliver, and Dr. Cunningham upon the use of phosphorus in the manufacture of matches have been prepared and published. The reports in no way show signs of the scrappiness which results from hasty compilation; but, considering the importance of the question under investigation, the tasks deputed to these three gentlemen have been achieved with more than ordinary official despatch.

The threefold conclusions which these gentlemen have arrived at may be briefly stated thus:—No efficient substitute for yellow phosphorus is available, and to forbid its use on the grounds of health would be a serious and unjustifiable blow to our export trade, seeing that by the use of reasonable precautions the dangers attending the manufacture of yellow phosphorus matches may be reduced to a minimum.

These statements will, no doubt, be anything but acceptable to the well-meaning, but half-informed, people who were so active in agitating against the use of yellow phosphorus during the latter half of last year, so it will be as well to deal a little more fully with the three heads of the report as we have summarised it.

We have not forgotten that last December we reported the proceedings of a syndicate which claims to have discovered how to make a non-poisonous strike-anywhere match, and that in this very issue there is a further reference to these matches. But it must be borne in mind that these matches have not yet stood the trying ordeal of everyday use by the fickle British public; and in the few remarks we publish this week there is a direct admission that in regard to easy ignition these matches are inferior to those at present in common use. Seeing that the public are accustomed to look for changes which are progressive we fear they will not take very kindly to any retrogressive innovation.

At one time and another a lot has been made of the great advantage of "safety" matches in diminishing the risks of fire, but this not unimportant consideration, as well as the several other advantages which are claimed, all pale before the superlative demands of convenience. It may seem strange that the "safety" match has not progressed more rapidly in public favour; but, nevertheless, the fact remains that over sixty tons of yellow phosphorus are consumed annually in the manufacture of matches, while for "safety" matches the consumption is under four tons. Since English matches are largely made for export, it is evident what a check our match industry would receive if the use of yellow phosphorus was forbidden by the Government.

Lastly, as regards the actual dangers incurred by match makers, there does not appear to be any need to resort to heroic measures. It is the same old trouble over again. It

is easy enough to frame efficient precautions, but it is most difficult to persuade the workers that they must act up to them. Mere cleanliness is far too simple and uninteresting a remedy for their ills, and rudely dispels the halo of martyrdom with which "victims" are encircled.

Dr. Cunningham states that there is no evidence to show that yellow phosphorus produces decay in sound teeth. There is no case known in which a person has contracted necrosis, unless the teeth were decayed or injured from some other source. These are two very important statements, and, coupled with the preventive measures which we publish elsewhere in this issue, show that, with reasonable care and cleanliness, the match maker's calling need be no more dangerous than the majority of industrial occupations.

PRECAUTIONS AGAINST PHOSPHORUS POISONING.

THE reports of Prof. Thorpe, Prof. Oliver and Dr. Cunningham to the Home Secretary on "The use of phosphorus in the manufacture of lucifer matches" have been issued. They are based not only on experiments and inspections made in England, but also on evidence personally acquired in France, Belgium, Holland, Sweden, Denmark, Germany, and Austria, and on information obtained from Russia, Switzerland, Italy, and the United States. Dr. A. Whitelegge, the Chief Inspector of Factories, in his memorandum summarising the report, says: The first and most important question which presents itself is whether the use of yellow phosphorus is to be prohibited as in Denmark, or allowed under conditions, necessarily very different from those which have prevailed hitherto, stringent enough to ensure the safety of the workpeople.

The advantages claimed for safety matches are that, while the cost is very little more than that of yellow phosphorus matches, their manufacture involves no risk to the health of the workpeople, and their use is attended with much less risk of accident from fire or poison. In this country the strike-anywhere matches of yellow phosphorus retain their hold upon the public favour by custom and by convenience, but for foreign and colonial use, especially in hot and humid climates, they are said to keep better and to resist damp.

So far as the home consumption is concerned, it does not seem that the prohibition of the use of yellow phosphorus would involve any serious hardship, and this course has already been adopted by Denmark and decided upon by Switzerland, care being taken at the same time to prohibit the use or importation of yellow phosphorus matches. But neither of these countries has or had any export match trade to lose. The United Kingdom, Belgium, Sweden, and Japan manufacture largely for export, and it is feared that immediate prohibition of yellow phosphorus would at once divert that portion of the trade to other countries, unless international agreement upon the subject were arrived at. If grave injury to the health of the workpeople were inevitable, the loss of the trade might well be regarded as the smaller sacrifice of the two, but the result of the inquiry points to a different conclusion. With due selection of workpeople, strict medical and dental supervision, proper structural and administrative conditions, and substitution of machinery for hand labour in the phosphorus processes, it seems that the dangers hitherto attending the use of yellow phosphorus can be overcome.

The preventive measures—short of actual prohibition of yellow phosphorus—which have been adopted or suggested are as follows:—

1. Limitation of the use of yellow phosphorus In Belgium it is forbidden to use a paste containing more than 8 per cent. of yellow phosphorus, and in Holland the regulations are somewhat more stringent if the proportion exceeds 5 per cent. In the United Kingdom it would seem that these limits are not exceeded.

In Russia a tax is imposed upon the manufacturer of yellow phosphorus matches, with the result that safety matches are displacing the strike-anywhere kind.

2 Substitution of machinery for direct handling in the dangerous processes of manufacture. In this direction great progress has been made in recent years on the Continent and in America, but little has been effected in this country with the exception of the factory at Liverpool, where American methods have been introduced. By the use of suitable machinery it is possible to eliminate nearly all the handling of the paste on matches and to reduce greatly the number of persons engaged in the dangerous processes, but the fumes have still to be reckoned with.

3. Efficient mechanical ventilation, directed not only to the purification of the general atmosphere of the workrooms, but more particularly to carrying off the fumes at the point where they are produced. In this respect, again, the reports describe conditions in certain factories much *in advance* of those found in match factories generally.

4. Complete separation of departments.

5. Limitation of fumes. Mixing should be done in closed vessels. Dr. Thorpe shows that fuming is checked by keeping the temperature low. Turpentine has the effect of preventing fuming, and it has been suggested that advantage should be taken of this property by adding a small quantity of turpentine to the paste and by charging the draught directed across the dipping-stone with turpentine vapours. Thorough drying after dipping arrests the fuming which persists in matches which are at all damp. It seems probable that the thorough drying of wax matches accounts for the comparative immunity of the persons engaged in boxing them, and that the hand-cutting and boxing of double-length matches dipped at both ends is additionally dangerous by reason of the incompleteness of the drying which that method permits.

6. Limitation of hours or days of employment in the dangerous processes. Alternation of employment.

7. Avoidance of handling as far as practicable, especially before thorough drying—*e.g.*, in the cutting and boxing referred to above. Handling, and the closer contact which it implies, involves added risk of inhaling fumes and of carrying phosphorus to the mouth by hand.

8. Selection of workpeople, excluding—

(*a*) children and young persons, as being less likely to exercise due care, although their dental condition would usually be better than that of adults;

(*b*) debilitated persons, especially those suffering from phthisis;

(*c*) persons with unsound teeth.

The attempts at selection hitherto made have been partial and inadequate. The striking figures given by Dr. Cunningham show the dangerous processes are very largely carried on by persons needlessly exposed to constant danger by reason of the neglected condition of their teeth, and that the condition, as was to be anticipated, grows steadily worse as age advances.

9. It is not enough to secure fitness at the outset. There is need for sustained supervision, and particularly for periodic dental examination of all workers in phosphorus, and for the entry of all necessary particulars in a health register. This system has already been adopted in other countries, and a voluntary beginning has at last been made in certain factories in England.

Compulsory dentistry, even if provided at the expense of the employer, is not likely to be welcomed by all the persons employed; but the conclusion to be drawn from the evidence now presented is that soundness of teeth is an indispensable condition of fitness for employment in phosphorus processes.

10 Notification of cases of illness due to phosphorus is already provided for by statute and by special rules, but needs to be more clearly defined and far more strictly observed.

With a properly kept register and periodic dental examination it should be impossible for cases to be concealed or overlooked in the future.

11. Suitable and sufficient facilities for washing, to include hot and cold water basins, soap, towels, etc. Also supervision to ensure that they are regularly used.

12. Systematic gargling with a suitable antiseptic mouth wash.

13. Wearing overalls to prevent the clothing from contact with phosphorus.

14. General cleanliness of premises.

Some of these can hardly be prescribed in detail, by legislation or by special rules, without fettering unduly the choice of alternative methods of attaining safety, but it is clear that, while the use of yellow phosphorus is continued, more stringent conditions must be enforced by revision of the present special rules

The arrangements which promise safety involve expense, and some of them may be difficult of adoption in old and small works. But they are already in use at home and abroad with good results, and can no longer be represented as impracticable or Utopian. They will obviate a not inconsiderable cost to the workpeople in suffering and to the employers in maintenance of injured persons during the years of illness which phosphorus necrosis causes. The effect will be to limit the use of yellow phosphorus and to lead to the substitution of less dangerous materials and new methods not involving risk to the health of workers, and to stimulate invention generally.

THE GOVERNMENT PETROLEUM BILL.—Mr. Collings has informed Mr. Duncome that the Government Bill dealing with the report of the Royal Commission on Petroleum would be introduced as soon after Easter as possible.

THE SALT TRADE.—The scarcity of ships for the Eastern markets and also coastwise has made the export total of February less than last year's; though it is a very fair average. The shipments from Liverpool totalled 28,473 tons, and from Runcorn and Weston 6,561 tons, a total of 35,034 as compared with 40,921 in the corresponding month of 1898. The export reached 33,914 tons, while the United Kingdom received 1,120 tons, the figures for February, 1898, being 38,251 tons and 2,670 respectively.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Improvements in Consuming Smoke. S. Cowper-Coles. 4,841. March 6.

Preventing the Liquefaction of Resin, Wax, Pitch, and Tar. A. Gentzsch. 4,902. March 6.

Improvements Relating to the Treatment of Sewage. M. J. F. Thirault. 4,907. March 6.

Precipitation of Precious Metals from Cyanide Solutions. F. W. Martino and F. Stubbs. 4,925. March 6.

Treatment of Smoke. M. H. Berry. 4,964. March 7.

Recovery of the Sulphurous Acid used to Enrich Phosphatic Chalk C. Ranson and H. Gouthiere. 4,965. March 7.

Improvements in Fertilisation of Soil. G. Fuchs. 5,033. March 7.

Precipitation of Gold from Chloride or Bromide Solutions. F. W. Martino and F. Stubbs. 5,034. March 7.

Obtaining Cyanogen Compounds. J. Mactear. 5,037. March 7.

Storage Plates for Accumulators. E. Goller. 5,099. March 8.

Aerobic Filters for Sewage. W. M. Ducat. 5,102. March 8.

Composition to Render Coal Smokeless. T. Briggs. 5,106. March 8.

Treatment of Alunite (or Alum Stone) for the Production of Alumine, etc. O. Lindner. 5,116. March 9.

Electrolytic Decomposing Apparatus. T. J. Holland and A. P. Laurie. 5,199. March 9.

Porous Diaphragms for Electrolytic Apparatus. T. J. Holland and A. P. Laurie. 5,200. March 9.

Alloys of Aluminium and Magnesium. A. G. Brookes. 5,224. March 9.

Alloys of Aluminium and Magnesium. A. G. Brookes. 5,225. March 9.

Treating Sewage and Trade Effluents. A. Pickles. 5,293. March 10.

Production of Ozone by Electricity. J. H. Lamprey. 5,322. March 10.

Apparatus for Consuming Smoke. T. Nurse. 5,323. March 10.

Apparatus for Destroying Smoke. E. C. Dulier. 5,326. March 10.

Manufacture of Soap. W. H. Evans. 5,347. March 11.

Utilisation of Waste Sand from Glass Works. D. Herman. 5,353. March 11.

Smoke-consuming Furnaces. S. H. Berry and H. G. Watel. March 11.

Dephosphorising and Desulphurising Iron and Steel. C. T. Hennig. 5,404. March 11.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in and Apparatus for Effecting Electrolysis. W. L. Wise, 46, Lincoln's Inn Fields, W.C. (Communicated by Messrs. Solvay & Co., 25, Rue du Prince Albert, Brussels, Belgium.) Eng. Pat. 7,470. March 28, 1898.

This is an improvement in cells with a mercury cathode. There is no rocking motion. The mercury is kept perfectly horizontal. Advantage is taken of the fact that the amalgam which forms, when the current passes, tends to remain at the surface of the mercury, by reason of its lightness. It is removed by the introduction of fresh supplies of mercury at the bottom of the containing trough, thus causing the amalgam to flow over a weir, which runs along one side of the trough. There are two figures.

Improvements in Electrolysis. W. L. Wise, 46, Lincoln's Inn Fields, W.C. (Communicated by Messrs. Solvay & Co, 25, Rue du Prince Albert, Brussels, Belgium.) Eng. Pat. 7,471. March 28, 1898.

In order to avoid the loss which results from recombination, when chlorides are electrolysed without a diaphragm, a saturated solution of salt is caused to act as a diaphragm, the anodes being immersed in a weaker, supernatant solution, the cathode being of mercury. The solutions are kept at a constant density by causing the two layers to flow off separately, when they can be re-charged with salt and returned to the cells. This process is continuous.

Improvements in or connected with Apparatus for the Manufacture of Potassium Chlorate or Sodium Chlorate by Electrolysis. J. Brock and The United Alkali Company, Ltd., G 11, Exchange Buildings, Liverpool. Eng. Pat. 9,002. April 18, 1898.

The mixture of salt or potassium chloride solution with the requisite amount of caustic alkali, is electrolysed at a temperature of 60° to 80° C. in beaker-like cells, arranged in terraces, so that the solution may flow by gravity from cell to cell. The cells are of metal, lined with porous material, and act as cathodes, the anodes being sheets of platinum, connected with the cells in series. In the case of potassium salts, the solution escaping from the last cell is run direct into crystallisers. With soda, it is boiled down first, and the undecomposed sodium chloride salted out.

Improved Process for Producing the Sulphides of the Alkalies and the Alkaline Earths from the Sulphates thereof, and for Obtaining from such Sulphides, Free Sulphur, Sulphurous Acid, Sulphide of Hydrogen, and Carbonates of the Alkalies. W. von Baronoff, 26, Rue de Batignolles, E. Hildt, 31, Avenue de Montsouris, both of Paris, and C. F. Claus, 9, Oxford-road, Gunnersbury, Middlesex. Eng. Pat. 7,269. March 25, 1898.

Anhydrous sulphate of calcium is heated in retorts with ground carbon to form sulphide of calcium and carbon dioxide. The novelty lies in the fact that only the theoretical amount of carbon is used instead of the customary large excess, when it is claimed there is a complete reduction of the sulphate, and, above all, the gases given off are nearly pure carbon dioxide (90 to 95 %). The sulphide suspended in water, is treated with the carbon dioxide, and the resulting sulphuretted hydrogen burnt to obtain sulphur, by the familiar Claus process, but it is claimed that owing to the purity of the carbon dioxide given off from the retorts, a much purer sulphuretted hydrogen is also obtained and the process rendered economical. If desired, part of the sulphuretted hydrogen can be passed over heated calcium sulphate free from carbon, so as to form calcium sulphide and sulphur dioxide; the latter being very pure, can be used industrially, and any excess burnt with sulphuretted hydrogen to form free sulphur and water.

Improved Still for the Extraction of Benzol, Toluol, and Xylol from their Admixture with Creosote or other Heavy Oils. W. Irwin, Wilton Polygon, Cheetham Hill, Manchester. Eng. Pat. 8,655. April 13, 1898.

The lighter products are driven off by steam in a column still in much the same way as gas liquor is distilled, only a dephlegmating chamber is provided at the head of the still, by means of which a distillate is obtained of sufficient purity to be treated with sulphuric acid direct.

An Improvement in or Applicable to Anti-fouling Compositions and the like. J. F. Dell, 88, Dalston-lane London. Eng. Pat. 5,373. March 4, 1898.

The claim is for the use of mercury or mercuric chloride as the essential germicidal ingredient in anti-fouling paints. About 3 drachms to every pound of paint is a suitable quantity. For preserving wood a week solution of mercuric chloride and ammonium chloride is suggested.

A Milk Can on Wheels.—The directors of the Grove Chemical Co., Limited, are introducing a milk can fitted with a pair of wheels. The can will not take up any more space than the ordinary one, as the wheels come within the square of the can's circumference. The slightest tilt backward brings the wheels into play, making it into an ordinary truck. Being strongly made and small in diameter, the wheels will not be liable to get broken, and they can be fitted to existing cans. Particulars can be had from Messrs. F. and W. Haworth, Grove House, Appley Bridge, near Wigan.

Messrs. David Thom, Domrier, and Co.—The first ordinary general meeting of shareholders in this Company, was held at 65, King-street, Manchester, on Wednesday. Mr F. A. Roberts presided. The report stated that, after making allowance for depreciation, bad and doubtful debts, all working expenses, salaries, and advertising expenses, there remained a net profit of £12,403. Out of this sum the directors had already paid the interest due to the vendors, which was £2,219., and the dividend on the preference shares to December 31, 1898, leaving a balance of £6,325. After sundry other expenses had been paid £5,183 remained, out of which a dividend of 6 per cent. per annum was recommended on the ordinary shares. The report was adopted. Messrs. F. A. Roberts and A. L. Ormrod were re-elected directors.

Illegal Storage of Explosives.—At the Manchester City Police Court, on Wednesday, before Mr. Headlam, George Pettinger, an agent for the sale of explosives, living at Newton Heath, was summoned for storing explosives on premises not licensed for the purpose. On the 3rd inst. Major Cooper Key, Her Majesty's Inspector of Explosives, accompanied by Detective-Sergeant Balfe, visited the defendant's house, and in a hayloft at the rear they found 250 pounds of gelignite, 25 pounds of kynite, and three pounds of ammonite. Sergeant Balfe said the defendant had no place in the city licensed for the storage of explosives, and Major Key, in reply to the Bench, said that the material in question was used for mining purposes. Had it exploded it would have caused a frightful calamity in the city. Mr. Headlam said it was a very dangerous thing, and fined the defendant (who did not appear), the maximum penalty of £27. 16s. and costs, with £5. extra costs.

Reports of Companies.

UNITED ALKALI CO., LTD.

FOREIGN TARIFFS AND COMPETITION.

The eighth annual general meeting of the shareholders of this Company, was held on Friday afternoon, 17th inst., in the Law Association Rooms, Cook-street, Liverpool, Mr. John Brock (chairman of the directors) presided, and included in a large attendance were Colonel Sir David Gamble, Bart., C B., and Mr. Holbrook Gaskell (vice-chairmen), Messrs. J. E Davidson and James Tennant (managing directors), Lieut.-Colonel J. B Gaskell, Messrs. C. E. Barlow, J. C. Gamble, William Gamble, Holbrook Gaskell, jun., D. M'Kechnie, E. K. Muspratt, George Pilkington, Robert Shaw, P. J. Worsley (directors), and Eustace Carey (secretary).

The Chairman expressed regret that for the first time in the history of the Company they were deprived of the presidency of Sir Charles Tennant. He had hoped to be present quite up to the last moment—to the 14th March—but since that date he had written as follows:—"I am sorry to say that I am not well enough to preside over your meeting on Friday, the doctor will not hear of it, as the bronchial trouble does not abate." Sir Charles was suffering from influenza, and he (the chairman) was sure they would all join with himself in expressing the great regret which they felt at his absence.

The notice convening the meeting having been read by the secretary, The Chairman proceeded to deal with the year's operations, and said:—Those of you who were present at our last annual meeting will remember that I then took occasion to call the attention of our shareholders to the high tariff duties imposed on our goods exported to the United States and to most of the countries of Europe, giving several examples of their oppressive character.

TRADE IN ALKALI.

At that time the new scale of duties in the United States had only been in operation for about five months of the year we had then under review; during the past year we have had to face these duties during the whole year, with the result that our important trade with the United States in alkalies has been reduced to very small proportions in comparison to what it was before these heavy duties were imposed. Take the following figures in illustration of this. In 1895 the total export of soda ash from this country to the United States was 125,698 tons; in 1898 it fell to 29,323 tons. Of caustic soda in 1895 the total export from this country to the United States was 33,625 tons; in 1898 it fell to 11,171 tons. These figures show very clearly the effect produced on our trade by the imposition of these excessive duties—in other words, the British manufacturer has been practically shut out for the benefit of the American manufacturer, who under the protection of enormous duties, has largely increased his production, so that now he is able not only to supply all that his own country requires, but has a surplus for export. And we have to meet the same state of things all over the continent of Europe, a tax more or less severe being imposed on the British made article. Last year I gave numerous instances of these imposts, and therefore need not repeat them to-day, but I want you to understand very clearly what it is that hinders and hampers our trade and causes its contraction. In our important

TRADE IN BLEACHING POWDER,

we have not only these high duties to face, but opposition of another kind, provided for our special benefit. I mentioned last year the fact that a syndicate of German manufacturers had bought up the whole production, without limit of quantity, over three years, of the bleaching powder made by an electrical process in this country, at a fixed price, and was offering it against us in the home market very much below what they had given for it, for the express purpose, as they phrase it, of "keeping us in order;" in other words, to endeavour to induce us by a system of reprisal to keep our goods out of the Continental markets. One would have thought that the heavy duties our goods have to pay on entering those markets would have been ample protection for the Continental manufacturer. If it is not, they must either be very poor manufacturers, or otherwise be pocketing very large sums of money at the expense of the Continental consumer. This transaction of the German syndicate, which has still some eighteen months to run, has caused a reduction in the selling price of bleaching powder over the year 1898 of from 20s to 30s. per ton, and has in fact cost us last year a sum of money sufficient to have paid our ordinary shareholders a moderate dividend on their holding. The circumstances I have named are matters over which we have no control whatever. They are not matters of new processes or old, of

ECONOMICAL WORKING

or otherwise I have seen it stated in print, and no doubt you have seen it also that the present falling off in the activity of our trade is due *largely* to the working of obsolete plant, that we have not kept pace *with modern improvements, and that the technical* training of the heads and officials of the English chemical industry is defective as compared with those of other countries. These are not the causes, operating adversely, at least so far as our Company is concerned. The true causes are those I have stated to you; give us reasonable duties to face and fair play, and we can hold our own, and hold it well. I am bold to say that our costs of production will compare favourably with those of other manufacturers—English, Continental or American—but costs cannot possibly be reduced sufficiently to make up for a duty of £11. 13s. 4d. per ton on an article which sells at about £30 per ton. Yet this is what the American tariff requires us to do; hence, as I stated last year, the only way to retain our trade is to have an interest in manufacturing in the protected country. This we have done.

THE AMERICAN WORKS.

A Company has been formed and located at Bay City, in the State of Michigan, called the North American Chemical Company, in which we have a controlling interest. These works, primarily established for the manufacture of chlorate of potash by electrolysis, began operations about November of last year, and, though not yet working at their full capacity, are turning out an excellent article at a cost quite within our expectations, and promise to be a very satisfactory investment for our Company Having started manufacturing so late in last year they do not contribute anything to the profit side of our present balance-sheet. We are earnestly endeavouring to open up new markets, and extend the Colonial and other branches of our trade; but competition is keen, and we meet the foreign protected manufacturer everywhere, for, under the stimulating effect of high protective duties, he has so increased his production that his own home market can no longer absorb what he manufactures, and as it pays him best to keep his factory running full, he exports his surplus at any price he can obtain.

EXTENSIONS FOR CYANIDES AND FERTILISERS.

During the year we have thought it politic to extend our plant for the manufacture of cyanides and fertilisers; both of these extensions we expect to have in full operation during the present year. The arrangements I named last year as having been made with other manufacturers of alkalies have worked satisfactorily during the present year, and been the means of steadying prices and preventing violent fluctuations, an important matter to those using our goods as raw material in other manufactures. We have still the "ubiquitous" inventor to deal with, and one is almost disposed to vote him a nuisance; but he has his use and merits, and must have our careful attention. But it is really surprising how little sound grain there is in what is offered to us; still, some of these grains may turn out golden, though they require a good deal of careful winnowing. It is our desire, as I have stated on previous occasions to multiply the articles we manufacture, in order that we may have a steadier business return, and avoid undue dependence upon one or two articles. We have during the past year felt the benefit of this policy, and believe that during the present year we shall profit by it still more.

COST OF PRODUCTION AND MAINTENANCE.

We have given unremitting attention to the question of cost of production in every department, knowing well that this is a vital point, and at the very foundation of profit earning, and of our being able to hold our own under the severe competition we have to meet. We have kept our works in a thorough state of repair and efficiency, the cost of which has been defrayed out of revenue. Turning to the accounts, you will notice that our share capital and debenture stock remain the same in amount as before. The debts owing by the company are £237,568. 16s. 3d. or £30,158. 19s. 8d. less than last year. The reserve fund account remains the same as last year. On the other side of the account we have additions to property, plant, freeholds, etc. at £29,130. 12s. 11d., which, after deducting the amounts realised by sales of obsolete plant and property, and the amount written off for depreciation leaves that account at £7,179,048. 6s. 5d. as against £7,211,785. 18s. 5d. last year. The stocks of manufactured products, raw materials, stores, and other articles have been carefully valued, and written down when necessary, to meet the fall in values during the year. They stand at £786,835. 8s. 4d., or £46,122. 19s. 11d. less than last year. The debts owing to the company amount, with the outstanding consignments, to £399,519. 1s. 8d., or £71,586 4s 2d. more than last year. Money on deposit at the bank and investments amount to £322,855. 14s. 1d. Cash in hand at head and district offices, with bills receivable, amount to £12,527 7s. 6d. The profit and loss account shows that the gross profit, including interest on investments and transfer fees, has been £374,452. 3s. 4d., or £14,078. 1s. 10d. less than last year. On the other side of this account, directors' fees are £700 less, income-tax £258. less, and bad debts £243. more. The net profit, after payment of debenture interest and all other charges, is £198,262 14s 9d. against £213,363. 11s. 5d. last year. I venture to think that this reduction in net income, disappointing as it may be to those of us who hold ordinary shares, is much less than might have been expected considering the curtailment of our trade forced upon us by oppressive tariffs. How long we are to labour under these adverse

conditions it is impossible to say; all that we can do, and what we are doing, is to use increased energy to extend our business in other directions.

THE OUTLOOK.

Possibly you may wish that I should say a word or two as to our prospects for the present year. I cannot, of course, at this early period of the year, tell exactly what changes may be in store for us before the year closes, but at present the prospect is distinctly hopeful. Trade generally is much more active, and of larger volume, calling for increased quantities of our goods. Some articles, such as copper, are likely to do well; others, such as caustic soda and bleaching powder, though possibly more in quantity, are at present ruling very low in price in consequence of the sever competition I have named. We shall also have to pay higher prices for some raw material we use, such as coal, iron, etc. Still, the balance, I think, is likely to be in our favour, and we shall certainly do all that is possible to make the best of the situation. Proceeding, Mr. Brock said that a shareholder had sent him two or three questions which he wished him to say something about. He wanted to know had there been a valuation of property and plant since the formation of the company? If there had been, where was it taken, and by whom? And how did it compare with the £7,179,048. in the balance-sheet? If there had been no such valuation since the formation of the company, how were shareholders to know that the property and plant were really worth the ground on which it stood? Well, there had been no outside valuation of the property of the company since its formation, and a kind of revaluation of that sort would be of no use practically. It would be a very expensive thing, and no object would be gained. They had, however, had many of their works valued by outside valuers for assessment purposes, and in every case these outside valuations had been considerably in excess of what they themselves had put them down at. (Hear, hear.) This was largely a question for debenture holders. He might add that they had kept up their works in a thoroughly efficient manner, and as a going concern they were to-day worth more money than when they started. Then their friend asked, "How many unproductive works were in the possession of the company; what had they cost; and what was likely to be done with them? They only had one or two unproductive works at the present time, and several of these—in fact, most of these, they kept in repair in reserve, because any day they might have to call for a larger outturn of material, as they were pushing forward new markets, and they might require to put their works into operation at any time. Then their friend asked a question about the stocks. "Were they set down at cost price, and in any case where present value was less than cost had reduce value been taken?" Their stocks of manufactured material ready for the market were taken under market values. Their stocks of materials in process of manufacture were taken under cost price. He did not think they could alter that system. It was a sound one; they had always stuck to it, and when they had once reduced an article in process of manufacture, though the selling price rose, they never raised it—they kept it where it was. Another question was about investments, which were put down at £262,146. The question was—"What had they yielded, if anything, and what account had been credited with the yield?" If they would look at the balance-sheet, they would see under the head of investments £110 471. 4s. general. The whole of that was liquid, in various investments that could be turned into money to-morrow. The other subsidiary companies were investments, such as that at Bay City, and one or two other small ones, and that was the way in which this amount was invested. They had, of course, also a considerable sum of money lying at their bankers, and all of them knew what they were likely to get for that.

WHOLE OF THE AMERICAN PLANT RUNNING.

With regard to the plant of the Bay City Works, they had been advised by cable that day that the whole plant was now running. Their esteemed president, Sir Charles Tennant, in his letter, had said:—"Considering all the difficulties you have had to deal with during the past year, the result is fully better than I anticipated." And Sir Charles Tennant still retained his very large holding in the ordinary shares of the company. The chairman concluded by moving the adoption of the following resolution:—"That the report and statement of accounts be received and adopted; and, after carrying forward £29,277. 3s. 2d., the following dividend be, and is hereby, declared out of the profits which have accrued during the twelve months ending the 31st December last, such dividend to be payable on the 21st inst.—namely, on the £10. preference shares, a dividend of 7s. per share, less income tax, making, with the interim dividend paid in August last, a dividend of 7 per cent. per annum."

Mr. P. J. Worsley seconded the resolution, and said that it might be of interest to the shareholders to hear a word or two about the expansion of the company in the United States. Mr. M'Kechnie and himself paid a visit to Bay City in October last, and were very much pleased with the location of their works there. They were satisfied that the property had been wisely chosen and obtained on distinctly favourable terms. It was situated on the shores of Lake Huron, at a very important centre, with excellent water carriage and railway conveniences. The plant had been started a few days before they got there, and had gone on without a hitch. The article they were making there was of first-rate quality, and gave great satisfaction in the States. The electrolytic plant was of the newest construction, and reflected great credit on their late friend Dr. Hurter, and the engineer, Mr. Duff. They had every reason to be satisfied with the production and its economy, and trusted to see very substantial results at the end of the next half year.

Mr. Maguire, a shareholder, amid some laughter, complained that more travellers were not employed to push the dry soap and other laundry specialities of the company in Liverpool. He asserted that there was no better soap on the market at the price, and it only wanted fair-play to enable the company to do a big business in it.

In reply to some questions regarding the depreciation, the Chairman said they had written off altogether £650,000., but at the same time they kept their works in a thorough state of efficiency out of the revenue, and, as he had said, the works as a going concern were of more value now to the debenture holders than at the time of the inception of the company. As regarded liquid investments he said that, as they were of first-class character, the average rate of interest did not exceed 4 or 5 per cent.

The resolution was then carried with two dissentients.

Mr. John Temple afterwards moved that Messrs John Brock, C. E. Barlow, E. K. Muspratt, George Pilkington, R. Shaw, and J. C. Stevenson be re-elected directors. He remarked that they could not but admire the dogged perseverance with which the directors had conducted the company's business.

Mr. W. M'Quie seconded, and remarked that if at the end of next year the directors had no better account to give them it would not be for want of downright pluck and energy.

The motion was adopted unanimously, and the Chairman, in reply, expressed the determination of the Directors to do their best for the Company in future as they had done in the past.

Mr. H. Wade Deacon moved the reappointment as auditors of Messrs. Stead, Taylor and Stead, T. W. Read and Co., Finney and Son, and Monkhouse, Goddard & Co.—This was seconded by Mr. Edwin Hunt, and carried.

Mr. E. K. Muspratt proposed a vote of thanks to the staff. He remarked that the Chairman had very properly stated, in his opening observations, that their main end should be to reduce the cost of production. There were obstacles which they could not possibly overcome; but there was one thing they could do, and that was to manufacture their goods at the lowest possible cost. He maintained that owing to the great assistance they got from their staff they were able to do that. Last year they had had to lament the death of Dr. Hurter, and as it had been pointed out at the time, it was exceedingly difficult to replace such a man, who was known all over the world as one of the greatest technical chemists then existing. They had since, however, he was glad to say, had a number of young men brought up partly under Dr. Hurter's direction, who were carrying out very efficiently the scientific portion of their work. They had sustained great losses by the death of such prominent officials as Mr. Wild (district director of St. Helens), Mr. Samuel Harrison, Mr. Glendinning (formerly of St. Helens, and latterly of the Anglo-Sicilian Company), Mr. Pritchard (Widnes), and Alfred Dyson. They had in various departments gentlemen who were carrying out their work with the greatest efficiency, and he maintained that it would be very difficult indeed to find a better staff anywhere in this country.

Mr. Holbrook Gaskell seconded, and said that too much could not be said in favour of the staff. The success of the Company, so far as it had gone, was largely due to their efficiency, activity, and faithfulness. The late Dr. Hurter was a man of rare scientific acquirements, who had a thoroughly practical knowledge of their business, and apart from that, he was a man of general scientific acquirement. He was a personal friend of his own, and in addition to his business knowledge was a man of high moral worth.

The Chairman said he could thoroughly endorse what had been said about the staff. If they tried they could not get a better selection of men to carry on the great business of the company. He was personally in contact with them every day, and knew them to be men in whom they might have the greatest confidence, and with whom it was a pleasure to work.

A vote of thanks to the Chairman closed the proceedings.

NATIONAL EXPLOSIVES CO. LTD.

The report of the directors for the year ending December 31 last states that the profits for the year amount to £30,737, which, with the balance of £355. brought forward from the previous year, gives a total of £31,092. It is decided to write off the property account, the amount charged, expended during the past year on additional buildings and plant—viz., £2,109.—thus keeping the property account at £90,000., and to place the sum of £7,500. to reserve account, bringing this account up to £10,000. The directors recommend that £19,017. shall be distributed amongst the preference, ordinary, and

deferred shares, in accordance with Article 96 of the Articles of Association, and that the balance of £2,465. be carried forward. The preference shares will be entitled to receive a dividend at the rate of 9 per cent. per annum, less 3 per cent. already paid by way of interim dividend. The ordinary shares will be entitled to receive a dividend at the rate of 11 per cent. per annum, less 2½ per cent. already paid by way of interim dividend, and the deferred shares will be entitled to the sum of £4 5s. per share.

DIVIDENDS.

Bowman, Thompson, and Co., Ltd.—The directors of Messrs. Bowman, Thompson, and Co., Limited, chemical manufacturers, of Lostock Gralam, Northwich, recommend a dividend for the year of 7 per cent. on the preference shares and 7½ per cent. on the ordinary shares, which, including an interim dividend paid on September 1, will absorb £38,213., leaving a balance of £9,790. to be carried forward.

Rio Tinto Co., Ltd.—The directors, after payment of the half-year's dividend on the 5 per cent. preference shares at the rate of 2s. 6d. per share and writing off the amount of drawn bonds and sundry depreciations, in all £116,400., recommend a final dividend on the ordinary shares of 27s. 6d. per share, making, with the interim dividend paid in November, £2. 7s. 6d. per share, or 47½ per cent. for the year. They add £50,000. to the reserve fund, and carry forward £13,500.

THE BORAX COMPANY, LIMITED.

THE adjourned hearing of this case was completed this week before Mr. Justice North. It referred to an application for an injunction to restrain the Borax Company, Limited, from parting with or disposing of any part of or the whole of its property and assets to Borax Consolidated, Limited, a company which had been formed to acquire and take over the assets and property of companies now carrying on the sale and manufacture of borax.—After hearing counsel's further arguments, his Lordship, in giving judgment, said that this was a very important case, and one in which either party would no doubt desire to take the opinion of the Court of Appeal as soon as possible. It was clear in this case that the Borax Company were parting with all their available assets of every kind excepting a sum of about £23,000., and they had to consider what would be the position of the debenture-holders under the proposed arrangement, they having at present a floating charge upon all the assets of the company. It was suggested that they would still have a charge upon all the property in Borax Consolidated, but it would not be the only charge, as at present. They would have this charge side by side with £900,000 other debenture stock, in addition to preference and ordinary shares. It seemed to him that the effect of what was being done was to put an end to the carrying on of the business of the company in such a way as to entitle the debenture-holders to say that their claims attached to the company's property, which had not at present been transferred to Borax Consolidated. The debentures were a floating security, and that had been held in many cases to amount to this—that they were not a specific charge upon any particular items of property so long as the business of the company was going on; and what seemed to be really the special test was—had the business upon which the debenture money was lent come to an end? In this case they were selling to the new company absolutely and entirely the borax business carried on by them, and they would only have such interest in it as arose from their having received the purchase consideration in the shape of debentures and other stock. It was said that under their articles the Borax Company had clear power to amalgamate with other companies and clear power to sell, and it was urged that there was an amalgamation, and not an out-and-out sale. It did not matter much whether it was an amalgamation or a sale; but in his opinion it was a sale. In either event, he thought that a transaction which amounted to ceasing to carry on a business in respect of which the debenture-money was lent was one which entitled the debenture-holders to say that it should not be carried into effect against their wishes. That being so, he would grant an injunction restraining the defendant company from carrying out the proposed sale to Borax Consolidated without first making due provision for the payment of the debenture-holders, whose assent to such transfer had not been obtained.

Society of Chemical Industry.—*Liverpool Section.*—The annual general meeting of the section will be held at the Chemical Laboratories, University College, on Wednesday, March 29th, 1899, at 7 p.m., when the election of officers and members of committee for next session will take place. The following papers will be read by Mr. Smetham (chairman of the section):—(*a*) "The Iodine absorption of Commercial Tallow" (*b*) "A Formula for calculating the amount of Glycerine in Crude Glycerine."

NOTES ON AMERICAN CHEMICAL TRADE.

SALT MANUFACTURERS' COMBINE.

IT is reported that a new consolidation of salt manufacturers will probably be organised under the laws of New Jersey, and will be known as the National Salt Company. It proposes to unite in one company salt manufacturing plants constituting about 90 per cent. of the product of evaporated salt from brine by artificial heat in the State of New York, and subsequently to acquire by purchase modern salt manufacturing plants in the States of Ohio and Michigan

The authorised capital of the company will be 10,000,000 dols., of which 4,000,000 dols. will be non-cumulative preferred stock, and 6,000,000 dols will be common stock. Of the authorised capital, 2,000,000 dols. of preferred and 3,000,000 dols. of common stock will be retained in the treasury of the company for the acquirement in the Ohio and Michigan fields. The net profits of the twelve salt manufacturing companies in the Warsaw field and of the National Salt Company of West Virginia (distributer), during 1898, on a production of about 300,000 tons of salt, were over 400 000 dols. By the consolidation proposed, it is estimated, economies in manufacture, transportation and distribution of salt will amount to not less than 150,000 dols, and that on the issue of 2,000,000 dols. preferred, and 3,000,000 dols. common stock for the properties in New York State, dividends can be paid at the rate of 7 per cent. on the preferred and not less than 13 per cent. on the common stock so issued. For the purpose of carrying out the consolidation and of providing funds for the manufacturers who require some cash as a condition of assenting to the consolidation, 1,000,000 dols. of preferred stock at par, with an equal amount of common stock, will shortly be offered for subscription.

* * *

The American Soda Company has been incorporated at Trenton, N. J., with on authorised capital stock of 1,000,000 dols., divided into 250,000 dols. preferred and 750,000 dols common stock. The preferred stock is to pay 8 % cumulative dividends. The company is authorised to manufacture and deal in bicarbonate of soda, salsoda, caustic soda, alkalies, and all the products deductible from salt. Also to mine salt and refine the same, and to use all such products in commercial combinations. The incorporators are James S Warden, Lewis E. Carr, Louis C. Ilfield, and Francis N. Whitney, New York, and Edward A. MacClean, Glen Ridge, N. J.

* * *

The Pennsylvania Salt Manufacturing Company of Philadelphia, which several months ago purchased 100 acres on the river front, just below Wyandotte. Mich., is reported to have closed a deal for 32 acres more, and will put up a 3,000,000 dols. chemical factory, employing 2,500 men.

* * *

The Anatron Chemical Company, of West Virginia, of which Franklin H. Kalbfleisch is president. James W. Eaton, treasurer, and P S. Tilden, secretary, has its new buildings at Elizabeth, N. J., nearly finished. The buildings of this company cover about 1¼ acres of ground.

* * *

Shipments of refined petroleum from the Corsicana, Tex., oil field have begun. The Waters-Pierce Oil Company recently sent out four cars of oil.

Messrs. J. Crossfield & Sons, Ltd.—The directors of this company find that after payment of the debenture interest there remains a balance of £31,201. This has been appropriated to payment of the half-year's dividend due on the preference shares, a dividend at the rate of 7½ per cent. per annum on the ordinary shares, carrying to reserve £10,000. (making a total of £30,000. to the credit of that account), and carrying the balance forward. According to the chairman's statement "the current year has opened very well, the deliveries during January, both for soap and chemicals, in the home and export markets considerably exceeding the figures for the corresponding month in any previous year."

The Tallow Market.—The value of tallow continues to improve; at the last public sales a further rise of 6d. to 9d. per cwt. was recorded, making the advance since the beginning of the year 2s. 3d. per cwt. in town tallow, 2s. in Australian mutton, and 1s 6d. in beef. Owing to the favourable position of the commodity a further advance is anticipated. The spot stock is short, and holders are not disposed to make forward contracts in the face of a strong general demand and reduced supplies. The stock at the beginning of March was only 20,742 casks, as compared with 26,867 casks at the beginning of February, and the present stock is not all available for home requirements, as a large proportion of it has already been secured for shipment to Russia when the Baltic ports are opened. The shipments from Australia are stated to be on a small scale, so that the outlook so far as supply and demand are concerned favours stiffer values for a time.

THE CHEMICAL TRADE OF CHINA AND JAPAN.

[SPECIALLY CONTRIBUTED.]

THERE are few surer signs of industrial progress in any country than an increasing use of chemical products, and the two far Eastern Empires, China and Japan, present a striking contrast in this respect. The conservatism of the former leads it to stick to the old preparations and medicinal remedies which have been in use for thousands of years; and only the European fringe, or such native industries as have come under the influence of European ideas, if not actually passed under European management, adopt Western methods. A list of the chemical imports into China, therefore, does not run into any great value, and the figures for 1897 having just become available, they are worth scanning for the purpose of picking out these items. For greater convenience the weights are converted into English, and the money into English currency at the nominal rate of 3s. 4d. per Harkwan tael, the exchange adopted for the purpose for a good many years past, though its real value is now only about 2s 8d.

Aniline dyes	£245,000
Medicines	125,000
Indigo	54,000
Morphia	23,000
Matchmaking materials	29,000
Paints	106,000
Colours	32,000

Two-thirds of the total value of Chinese imports pass through the port of Shanghai, the returns for which are given in much fuller detail, and reveal some items which are included in the general figures as unenumerated sundries, though, of course, it by no means follows that they bear a proportion of two-thirds of the total; indeed, in many instances there is evidence that this is not the case. Still, they are of sufficient importance in themselves to warrant reference.

Camphor	112,900 lbs....	.. £5,300
Chemical products ...	— ...	.. 5,000
Aniline dyes	— ...	... 180,000
Logwood extract ...	413,000 lbs....	... 6,350
Picric acid	72,200 ,, ...	... 1,900
Prussian blue... ...	153,600 ,, ..	... 6,000
Ultramarine	174,500 ,, ...	... 2,250
Glue	823,000 ,, ...	... 5,000
Indigo	— ...	... 50,000
Phosphorus (for match making) ...	77,700 ,, ...	... 8,600
Oil for paint	46,700 galls	... 5,000
Paints, assorted ...	1,180,000 lbs ...	... 13,500
Chlorate of potash ...	201,700 ,, ...	... 3,800
Saltpetre	1,400,000 ,, ...	... 13,500
Bar soap	51,850 cwts	... 35,000
Toilet soap	32,500 ,,	... 36,000
Sulphur	1,183,00 lbs ...	... 11,650
Sulphuric acid ...	646,000 ,, ...	... 2,300
Tar	14 300 galls	... 400
Varnish	117,300 lbs ...	... 7,000
,, ...	6,880 galls.	... 1,500
Vermilion	247,000 lbs....	... 25,000

In the Chinese returns the items are scattered about among sundries; in the Japanese they are carefully classified. The figures are again converted into English, the yen being taken at the exchange of 2s. Thus the total value of drugs, medicines, and chemicals is given at £512,000., and of dyes and paints at £411,000. The following are among the more important items:—

Carbolic acid... ...	147,000 lbs....	... £4,000
Salicylic acid... ...	152,000 ,, ...	... 12,000
Tartaric acid... ...	80,000 ,, ..	... 4,000
Alcohol	16,000,000 ,, ...	... 97,000
Alum...	2,750,000 ,, ...	... 3,500
Camphor	12,600 ,, ...	... 3,500
Dynamite	750,000 ,, ...	... 32,500
Glue	233,000 ,, ...	... 3,200
Glycerine	370,000 ,, ...	... 9,000
Liquorice	492,000 ,, ...	... 3,000
Phosphorus	231,000 ,, ..	... 28,000
Bromide of potash ...	63,000 ,, ...	... 4,500
Chlorate of potash ...	3,410,000 ,, ...	... 49,750
Quinine	245,000 ounces	... 9,000
Bicarbonate of soda...	1,830 tons	... 11,500
Caustic soda... ...	4,000 ,, ...	... 23,000

There is a great variety of miscellaneous articles of too small amount to mention. Turning next to dyes and paints the following are the principal items:—

Alizarine dyes ...	94,000 lbs....	... £10,500
Aniline dyes	1,433,000 ,, ...	... 93,000
Chinese & Prussian blue	59,000 ,, ...	... 2,750
Indigo	1,600,000 ,, ...	... 154,000
Lacquer	867,000 ,, ...	... 24,500
Logwood, extract of ..	1,800,000 ,, ...	... 28,000
Oil paints	1,800 tons	... 37,000
Varnish	— ...	... 7,250
Vermilion	118,000 lbs....	... 10,500

From these figures it will be seen not only what is in actual demand in China and Japan, but what a vast opening there is in the former country as soon as it is developed in real earnest. The competition will be keen, and our English manufacturers must be prepared to meet it, because those who secure the trade first will have the best chance of retaining it.

Trade Notes.

MATCHES WITHOUT YELLOW PHOSPHORUS.—Some time back we referred to matches made without yellow phosphorous under patents owned by the Non-Poisonous Strike-Anywhere Match Syndicate. (*C.T.J.* 604, p. 386). These matches do not perhaps light with quite the same facility as the best qualities of ordinary lucifers, but still they can be got to ignite practically anywhere They are not yet on the market, but the syndicate is stated to be completing an agreement with a large match-making firm whereby the matches will be manufactured under a royalty. The cost of the materials, which are similar to those used for safety matches, including, of course, red phosphorus, is said to be if anything less than of those for ordinary non-safeties, while, should the new form prove successful and supersede the old, manufacturers would presumably also save the cost of the expensive precautions now imposed for the health of workers with yellow phosphorus.

Obituary.—It is with regret we learn of the death of Mr. Richard Cadbury, head of the well-known Birmingham firm of chocolate manufacturers. Last month Mr. Cadbury went with his family to Egypt and Palestine, and his death took place at Jerusalem.

ANTI-SUGAR BOUNTY MOVEMENT.—Colonel Milward and those members associated with him in the Anti-Sugar Bounty movement of last Session are anxious that Sir Howard Vincent should remove his "blocking" motion from the Order-book, in order that the Government may be asked to give a day for discussing the whole question in its new phase. At the present moment this section are not so much concerned with the imposition of countervailing duties by Great Britain as with the enactment of a penal clause directed against the importation of bounty-fed sugar. Such a clause, they believe, would have the immediate effect of inducing all bounty-paying countries except France to fall into line with Great Britain forthwith. As for France, it is argued that, as her exports of sugar to this country amount to less than 100,000 tons, whereas our total annual importation is 1,400,000 tons, her refusal to co-operate would not cause any serious disturbance in trade.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols continue as disappointing as ever, 90's now being quoted 7½d. and 50/90's, 8d. There is no quotable change in carbolic acids or naphthas but creosote is very firm and active, while grease oils have advanced to £3. Pitch is steady at 26s. 6d. to 27s, f.o.b. East Coast.

Sulphate of ammonia has experienced a smart advance. The demand having increased, makers have not failed to profit by the occasion. Closing prompt prices are:—Beckton, £10. 15s.; London (outside makes), £10. 17s. 6d.; Hull, £10. 16s. 3d. to £10 17s. 6d; and Leith, £10 18s. 9d. Nitrate of soda firm.

MISCELLANEOUS CHEMICAL MARKET.

A fair amount of business continues to be done in alkalies generally, the export demand being particularly good for all the main products, and especially for bleaching powder, price for which, f.o.b. in hardwood casks is £5. per ton, subject to variations according to market; softwoods, free on rails, £4 5s per ton. Caustic soda in all qualities remains steady at former prices, viz., f.o.b. Liverpool, 77%, £7.12s 6d.; 74%, £7. 7s. 6d.; 70%, £7.; 60%, £6. nett per ton. Alkali 58% is firm at £3. 17s. 6d. per ton, bags, f.o.r., and works are well engaged

with orders. Soda crystals and bicarbonate unchanged. Saltcake is maintained at 29s. to 30s per ton f.o.r. Lancashire works, and 27s. 6d. per ton, f.o.b Tyne and Glasgow. Chlorate of potash and soda remain respectively at 3½d. and 3¾d. per lb. Borax firm at £16. per ton. For potash, caustic and carbonate, there is good enquiry, and prices are well maintained Prussiate of potash dearer at 7¾d. per lb. Prussiate of soda 5¾d. per lb., with active demand thereat. In brown acetate of lime there is rather more offering at £4. 17s 6d. to £5., c.i.f. Grey firm and scarce at £7. 17s. 6d. to £8. per ton. Foreign white sugar of lead £25. 10s , c i.f., and £26. for English make. Acetic acids are without change in value. Ammonia salts rather firmer. For aniline salt and oil quotations are lower. Arsenic is dearer, and there is much greater activity in the article at £16. 15s. to £17. f.o.r. Garston Green copperas in better request generally. Sulphocyanides quiet. Zinc and tin salts firm and rather a higher tendency in prices.

REPORT ON MANURE MATERIAL.

The home manure trade having now well set in, and demand for export being well sustained, there has been more disposition to purchase further material and prices have hardened somewhat in consequence. For 77/80 % Florida phosphate rock, about 8¾d per unit would now have to be paid, c i.f. to United Kingdom ports. Sellers of the lower grades of rock are firm, but prices are unchanged. Sellers of East Indian hone meal have been made at £5. 2s. 6d. per ton, ex quay Liverpool, and the market closes firm at the price. There is inquiry for common bones, but, in the absence of supplies, there is no business to report. Owing to scarcity of supplies on the Continent, the price of nitrate of soda has advanced there to about 8s. 9d. per cwt , whilst on the spot the closing value is 8s. 6d. per cwt. for refined quality ; 8s. 4½d. per cwt. for ordinary. Miscellaneous nitrogenous material is exceedingly scarce, and extreme prices are required for any odd lots put on the market.

THE METAL MARKETS.

LONDON, Wednesday.—Pig iron : Scotch warrants closed at 54s. 9½d. ; Middlesbrough, 48s. 3d. cash ; and hematite, 59s. 1½d. Copper easy : Chili bars, G.O.B.'s and G.M.B.'s, closed at £66. 17s. 6d. to £67. 2s. 6d. cash, and £67. to £67. 5s three months. Tin steady : Straits closed at £107. 17s. 6d. to £108. 7s. 6d. cash, and £108. 5s. to £108. 15s. three months ; Australian, £108. 7s. 6d. ; English ingots, £111. 0s. Lead firm : Spanish, £14. 7s. 6d. ; English, £14. 11s. 3d ; Silesian spelter, ordinary, £27. 7s. 6d. to £27. 10s. Nickel, 1s. 2½d. Antimony, £38. 10s. Quicksilver : First hands, £8. 5s. ; second hands, £8. 2s. *Copper shares* steady : Cape, 3⅞ to 4 ; Copiapo, 3 15/16 to 3 15/16 ; Libiola, 2 1/16 to 2 3/16 ; Mason and Barry, 3⅝ to 3⅞ ; Rio Tinto, 39 7/16 to 39 9/16 ; Tharsis, 8⅜ to 8⅝.

GLASGOW, Wednesday.—Market firm, and a good business. Scotch done at 54s. 9½d. to 54s. 10d. cash ; and 54s. 11½d. to 55s. 1d. month ; buyers, 54s. 9½d. cash ; sellers, 54s. 10d. Cleveland done at 48s. 2½d. cash, and 48s. 4½d. to 48s. 5d. month ; buyers, 48s. 2½d. cash ; sellers, 48s. 3½d. Cumberland hematite done at 59s. 4d. to 59s. 5d. month ; buyers, 59s. 1½d. cash ; sellers, 59s. 2½d. Middlesbrough hematite idle.

LIVERPOOL OIL AND COLOUR MARKET.

Wednesday.

OILS.—Palm oil is only offered in small quantities, and prices are maintained to the level of recent full rates. Olive keeps steady as regards price and position, but there is not much doing. Linseed keeps on the upward grade, sellers of Liverpool makes in export casks asking 19s. 3d. to 19s. 6d. cwt. Cottonseed is dear and remains firm at 17s. 6d. to 18s. for Liverpool refined. Castor oil is quiet, there being next to no business doing, though sellers still quote good seconds Calcutta at 2 15/16d and first pressure French at 2⅞d. per lb. Tallow has been quieter, but so far shows little inclination to ease in price. Resin is steady, with a moderate business doing in all grades at full rates. Spirits of turpentine are dearer, there being a fair inquiry for spot parcels at 35s. cwt. Petroleum steady, American 6d. to 7¼d., and Russian refined 5½d. to 6d per gallon.

CAKES.—There has again been heavy arrivals of American Western linseed, and prices consequently have further receded 2s. 6d. per ton, but at the lower rates buyers have operated to a very fair extent. At the close the value is given at £6. 3s. 9d. to £6. 12s. 6d , according to brand, but in other imported descriptions River Plate continue quite nominal in value for want of spot supplies, and Russian are nominally unaltered at £7. 7s. 6d., whilst Bombay have ruled irregular, and business has been done at easier rates, the quotation being now given at £6 15s. up to £7. 5s per ton, according to make. Liverpool makes have experienced a fair inquiry, and the quotations are steadily maintained at £8. to £8. 15s. per ton. Holders of American decorticated cottonseed continue steady, and still quote £5. 12s. 6d. to £6., at which rather more inquiry has been experienced. Only a quiet trade is doing in Liverpool makes at £6. 5s. to £6. 15s. per ton. Undecorticated Liverpool makes have sold to a moderate extent at £4. 16s. 3d. to £5. 5s., but spot parcels of sound Egyptian are a shade quieter, with sellers £4. 10s. per ton. There is rather more inquiry experieneed.

COLOURS.—Prices are steady, and practically without change. Ochres : Oxfordshire—common £10., medium £12., best £15. ; Derbyshire—common 40s , medium 50s., best 60s. ; Welsh—best 90s. ; seconds, 50s., and common, 18s ; Devonshire, 40s. to 45s. ; French, J.C., 65s. Umber : 40s. to 45s. White lead : £16. Red lead unchanged. Venetian red : £6. to £10. Cobalt : Prepared oxide, 9s. 9d. ; black, 9s. ; blue, 6s. Oxide of iron : Common, £7. ; medium, £10. ; finest, £20. Zinc oxide : £22 10s. to £25.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, Tuesday.

The most notable point about the market in chemicals this week is the strong and still strengthening position of sulphate of ammonia. For prompt f.o.b. Leith, £10. 17s. 6d. was paid towards the close of last week, and to-day the makers are very independent. At least, one of them holds off in the assurance of a further advance Forward business is again nowhere for the moment, sellers being so high-minded and buyers not at all inclined to fix themselves at the dear prices, which are the only ones quoted just now. Nitrate of soda is likewise stronger. Sulphate of copper is slightly firmer and the makers are holding for a stated figure, but resellers take a little less, say £23. 10s. to £24. Mineral oils, naphtha, and solid paraffins are all pretty healthy at prices unchanged. There are no new features in the market for common chemicals, which are in moderate movement at the old prices.

Chief prices current are :—Soda crystals, £2. 5s. to £2. 7s. 6d. basis nett, Tyne ; soda ash, £4. 2s. 6d. to £4 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne ; alum in lump, £4. 5s. to £4. 15s. nett, Glasgow ; caustic soda, white, 74° £7. 7s. 6d , 70/72° £7., 60/62° £6., and cream 60/62° £6 , all nett, Liverpool ; bleaching powder, 35/37°, £5. to £5. 10s. nett, Tyne ; saltcake, 30s. ; borax, English refined, £16., and boracic acid, £26. nett, Glasgow ; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s., nett, Liverpool ; bichromate of potash, 3½d., less 6% for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d., less 6% for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow) ; chlorate of potash, 3¾d , less 5% Liverpool ; nitrate of soda, 8s. 3d. to 8s. 6d. ; sulphate of ammonia, £10. 17s. 6d., prompt, f.o.b. Leith ; salammoniac, first and second white, £35. and £33. nett, any port ; sulphate of copper, £24. 0s., less 5% Liverpool ; paraffin scale, hard, 1⅞d. to 2d. per lb., and soft 2d. per lb. ; paraffin wax, 120° semi-refined, 2¼d. to 2½d. per lb ; paraffin spirit (naphtha), 9d. to 10d. per gal ; paraffin oil (burning), No. 1, 6½d. ; and crystal, 7d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower) ; ditto (lubricating) 865° £4. 15s. to £5. 5s., 885° £5. 10s. to £6., and 890/895° £6. 5s. to £6. 10s. Week's imports of sugar at Greenock were *nil.*

TYNE CHEMICAL REPORT.

Tuesday.

Business is only quiet in chemicals and prices generally remain unchanged. Soda crystals are quoted at £2. 12s. 6d. per ton, gross weight locally. Bleaching powder, £5. 5s. per ton. Caustic soda, 70% £7., and 76/77%, £8. per ton. Sulphur £4. 12s. 6d. per ton, f.o b.

Bleaching powder, softs, £5. 5s. per ton, nett ; do., hards, £5. 10s. per ton, nett ; caustic soda : 76/77% £8., and 70% £7. per ton, nett ; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett ; soda ash, 48%, £4. per ton, nett ; do., 50%, £4. 2s. 6d. per ton, nett ; do., 52%, £4. 5s. per ton, nett ; alkali, 36%, £3. 12s. 6d. per ton, nett ; white alkali, 48%, £5. per ton, nett ; do., 50%, £5. 5s. per ton, nett ; do., 52%, £5. 10s. per ton, nett ; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett ; do , 1 cwt. kegs, £7. per ton, nett : silicate of soda, 75°Tw., £2. 12s. 6d. per ton, nett ; do., 100°Tw., £3. per ton, nett ; do., 140°Tw., £3 7s. 6d. per ton, nett ; soda crystals, casks, £2. 12s. 6d. per ton, gross weight ; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. 0d per ton, nett; blanc fixe, £6. 10s. per ton nett ; chloride of barium, refined crystals, £6. 15s. 0d. per ton, nett ; do., crude calcined, £6. 5s. per ton, nett ; carbonate of alumina, £30. per ton, nett ; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt is quoted at 9s. 6d. per ton, f.o.b. Tees, with a steady demand.

COALS.—Trade is steady and there is a strong demand for small steam. Coke is also firm and the lowest price now quoted for export is 20s. per ton, f.o b. To-day's quotations are :—Best Northumbrian steam, 11s. 3d. to 12s. per ton ; second qualities, 10s. 3d. to 11s. per ton ;

small steam, 4s. 9d. to 5s per ton; gas coals, 10s. to 11s. per ton; bunker coals, 8s. to 8s. 6d. per ton; household coals, 10s. to 11s. per ton; coke, 19s. to 21s. per ton.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—There appears to be a prospect of an agreement between the Corporation here and the promoters of the New Dock Bill, viz., the North Eastern Railway Company and Hull and Barnsley Railway Company, which will prevent a repetition of the experience of a year ago. The Hull and Barnsley Railway Company continue to show increased returns. The markets here are as strong at increased prices as they were last week; unfortunately, however, it is a situation created from diminished supplies rather than excessive demand, for many of the mills are only half running. The principal imports to date have been:—Linseed, 79,183 qrs. against 48,601 qrs.; rapeseed, 29,051 qrs against 22,397 qrs. a year ago; cottonseed, 43,549 tons against 71,840 tons; oilcake, 6,755 tons against 4,821 tons; olive oil, 806 tuns against 1,019 tuns; tar, 885 barrels against 627 barrels. Refined cotton oil firmer and dearer, being quoted 15s. 9d. spot, naked; 16s., May/August; casks, £1., and barrels, £1. 10s. per ton extra. Linseed oil, 17s. 6d. spot, naked; 17s. 3d., April; 16s. 6d., May/August; boiled and refined, £1. to £1. 10s. per ton extra. Oleines from £18. 10s. to £21. per ton. Castor oil, cold drawn pharmaceutical, 28s. 6d. per cwt. in barrels; 3¾d. per lb. in cases; firsts, 26s. in barrels; 3 1/16d. per lb. in cases; seconds, 25s. per cwt. in barrels; 2 13/16d. per lb. in cases. Arachide nut oil from 26/- per cwt. Olive oil, £31. 10s. to £33. Olive oil soap, £16. to £18. per ton. Turpentine, 34s. per cwt. Resins unchanged.

CAKES.—The market for feeding stuffs is very good. Linseed cakes firm at £8. to £8. 2s. 6d. for 95% pure. Oil cakes (linseed) £7. to £7. 2s. 6d.; Russians, £7. to £7. 10s. Cotton cakes steady; best makes, £5. 2s. 6d. to £5. 5s.; seconds, £5.; decorticated, £6. to £6. 10s. Rape cakes: Black Sea, £4. 5s. per ton.

PAINTS.—Makers are busy, and orders much competed for. Leads, in sympathy with all metals, are firm, being quoted from £17. 10s. in oil for white. Paints, ordinary colours, from £10. per ton. Varnish makers find the high price of turpentine work much against them, any advance being difficult to realise.

New Companies.

A. Ludovic, Ltd.—CAPITAL, £20,000. in 2,500 pref. shares of £5. each, and 750 ordinary shares of £10. each. This company has been formed to acquire the business of a soap manufacturer carried on by A. V. E. de Clercq as A. Ludovic at the Margate Soap Works, Margate, Kent, and to acquire certain interests in freehold and leasehold estates at Ramsgate. The subscribers to the memorandum of association are:—F. A. de Clercq, 17, Vicarage Crescent, Margate, gentleman; A. V. E. de Clercq, 17, Vicarage Crescent, Margate, soap manufacturer; Miss M. M. M. de Clercq, 17, Vicarage Crescent, Margate; S. E. Burrows, 6, Cecil-street, Margate, architect; A. W. B. Baugham, 20, Cecil-square, Margate, cycle manufacturer; T. Gibbens, 5, Chichester Villas, Margate, accountant; E. H. Southgate, Westdown Mews, Cliftonville, Margate, jobmaster.

Carbides Development Synd., Ltd.—CAPITAL £30,000. in £1. shares. This company has been formed to acquire, own, and work inventions in connection with the production of carbides of calcium and magnesium, with the reduction of metallic oxides, ores, etc., and to adopt an agreement with W. R. Warner. The subscribers to the memorandum of association are:—P. E. Harding, 102, Cambridge Gardens, N. Kensington, chartered accountant; J. C. Wolfe, 24, Vereker-road, W. Kensington, director; R. M. Clarke, 48, Evelyn Gardens, S.W., clerk; C. J. Wilson, Knole Wood, Sunningdale, Berks, director; F. S. Pine, 22, Percy-road, Leytonstone, E., secretary; J. S. Mainutt, 25, Woodside, Wimbledon, clerk; E. C. Davidson, 10, Old Jewry Chambers, E.C., solicitor.

Cherub Soap, Ltd.—CAPITAL, £5,000. in £1. shares. This company has been formed to carry on the business of soap boilers and manufacturers, glycerine manufacturers, oil refiners, candle makers, etc. The number of directors is not to be less than 3 nor more than 5; the first are J. McTurk, R. McTurk, and A. McTurk.

Chilian Manganese Mines, Ltd.—CAPITAL £350,000. in £1. shares. This company has been formed to acquire the undertaking of the Chilian Manganese Mines, Ltd. (incorporated in 1889), and to acquire, develop, and turn to account any manganese or other mines, rights, lands, etc., in Chili or elsewhere. The subscribers to the memorandum of association are:—H. W. Ryland, 15, Bloomsbury Square, W.C., solicitor; T. Turketine, 52, Coleman-street, E.C., chartered accountant; W. Gundry, 17, Laurance Pountney-lane, E.C., merchant; J. G. Craggs, 52, Coleman-street, E.C., chartered accountant; J. A. Duncan, 2, Garden Court, Temple, E.C., barrister; J. E. Davis, 63, Drakefell-road, Hatcham, S.E., clerk; C. Scott, 52, Coleman-street, E.C., chartered accountant.

Read-Holliday Acetylene Co., Ltd.—CAPITAL £30,000. in £10. shares. This company has been formed to acquire that part of the business of Read-Holliday and Sons, Ltd, carried on at Huddersfield, Yorkshire, which is connected with the manufacture of acetylene gas generators, lamps and apparatus, and the sale of calcium carbide, and to manufacture, sell, and deal in acetylene gas apparatus, acetylene gas, cycle and other lamps, calcium carbide, etc. The subscribers to the memorandum of association are:—W. Cardno, Honoria-street, Fartown, Huddersfield, engineer; W. H. Armitage, Huddersfield, chartered accountant; E. Cockshaw, 62, Blacker-road, Huddersfield, secretary; T. P. Crosland, Birkby Grange, Huddersfield, manufacturer; J. Turner, Spink Field-road, Birkby, Huddersfield, chemist; J. T. Irwin, Heaton-road, Huddersfield, manufacturing chemist; R. R. Moyle, 81, Whitestone-road, Huddersfield, manager.

New Hermand Oil Co., Ltd.—CAPITAL £70,000. in £1. shares. This company has been formed to acquire the business of the Hermand Oil Co., Ltd., to adopt an agreement with the said company and its liquidator, and to carry on the business of mineral oil manufacturers, miners and merchants. The subscribers to the memorandum of association are:—D. Stewart, 30, George-square, Glasgow, insurance manager; D. Russell, Cadham, Markinch, Fife, paper maker; J. Ross, 23, Bath-street, Leith, merchant; E. Chalmers, Bonnington, Leith, merchant; W. Logan, 6, Merchiston Place, Edinburgh, coal master; A. Russell, 76, Thirlstane-road, Edinburgh, law clerk; W. Drummond, 21, Charlotte-square, Edinburgh, solicitor.

Gazette Notices.

PARTNERSHIP DISSOLVED.

C. CAMM and G. CAMM, steel manufacturers, Sheffield, under the style of Camm, Bagshaw, and Co.

BANKRUPTCY ACTS, 1883 and 1890.

Adjudication.

BROXAP, WALTER, Salford, analytical chemist.

IMPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.

Week ending March 11th.

Acetic Acid—

Holland,	120 pks.	A. & M. Zimmermann

Acetone—

Germany,	5 dms.	T. H. Lee
,,	8	H. Lorenz
France,	70	E. Catlin
Austria,	22	D. T. Domeier & Co.

Antimony Ore—

China,	10 t.	R. Waters

Arsenic—

Portugal,	160 brls.	Coverley & Westray
Germany,	90 cks.	Brit. Anti-Fouling Comp. Co.

Barium Sulphate—

Belgium,	50 cks.	J. L. Lyon & Co.

Barytes—

Germany,	2 pks.	R. W. Greeff & Co.
,,	22	W. Harrison & Co.
Holland,	24	O'Hara & Hoar
,,	24	Brandram Brs. & Co.
Belgium,	216 cks.	W. Harrison & Co.
Germany,	38	Wilkinson, Heywood & Co

Bleaching Powder—

France,	120 cks.	J. M. Steel & Co.

Bones—

Belgium,	4 t.	Sawyer, Sons & Co.

Caoutchouc—

France,	30 c.	E. Flageollet & Co.
P. E. Africa,	10	Hale & Son
Germany,	386	Lon. & Til. Ltge. C. & D. Co., Ltd.
,,	15	Lewis & Peat
,,	7	Major & Field
Madagascar,	69	Wainwright Brs. & Co.
Rep Colombia,	6	P. J. Armstrong & Co.
Brazil,	12	Naumann, Gepp & Co.
Germany,	7	Wallace Brs.
Holland,	200	J. Barber & Co.
Straits,	89	Butler's Wf., Ld.
Zanzibar,	151	L. & I. D. Jt. Co.
,,	19	Hale & Son
Aden,	4	L. & I. D. Jt. Co.
Straits,	702	E. Boustead & Co.
,,	262	W. Pope & Co.
France,	10	,,
E. Indies,	12	Prop. Bull Wf.
Zanzibar,	185	L. & I. D. Jt. Co.
B. Honduras,	6	Major & Field
Sydney,	8	Lewis & Peat
Germany,	100	Butler's Wf., Ld.

Carbolic Acid—

Germany,	50 pks.	J. G. Back

Castor Oil—

Italy,	10 cs.	L. & N. W. Rly. Co.
,,	20	A. & M. Zimmermann
France,	24	Lucas & Spencer's
	10 brls.	Wf., Ld.
,,	25 cs. 10 cks.	F. Boehm
,,	10	L. & I. D. Jt. Co.

Caustic Potash—

Germany,	5 c.	Vinolia Co., Ld.
Belgium,	25	A. J. Luke & Co.
,,	5 dms.	T. Ronaldson & Co.

Chemicals (*otherwise undescribed*)

Holland,	£13	H. Lorenz
Germany,	10	J. Norrenberg & Co.
Sydney,	370	L. & I. D. Jt. Co.
Germany,	235	,,
,,	19	Argo S. S. Co.
,,	217	T. H. Lee

Belgium, 36 John Cockerill Line
France, 155 Mory & Co.
Belgium, 1,080 T. H. Lee
Holland, 20 ,,
,, 16 Phillipps & Graves
,, 400 H. Harkness
U. States, 495 S. C. Jones
Germany, 318 H. Lambert
,, 7 Butler's Wf., Ld.
,, 180 A. & M. Zimmermann
,, 92 R. W. Greeff & Co
Holland, 176 Little & Johnston

Coal Products—

Naphthaline

Germany, 62 cks. Fleming's Oil & Chem. Co.
Belgium, 8 J. M. Steel & Co.

Pitch

W. Indies, 114 brls. L. & I. D. Jt. Co.
Germany, 50 H. Hunt
,, 50 Soundy & Sons
Belgium, 64 cks. Poth, Hill & Co.

Tar

Germany, 191 brls. Linck, Moeller & Co.
N. Russia, 141 ,,
U. States, 500 J. Allen & Co
,, 600 T. Nickels & Co.
,, 450 Produce Brokers Co.

Cream of Tartar—

Portugal, 5 cks. B. & F. Wf. Co., Ld.
France, 6 C. Atkins & Nisbet
,, 5 M. Ashby, Ld.
,, 2 H. Johnston & Sons
,, 17 B. & F. Wf. Co., Ld.
,, 5 18 pks. F. C. Devon & Co.

Disinfectants—

Germany, £22 Argo S. S. Co.
,, 30 J. Norrenberg & Co.

Dyestuffs—

Alizarine

E. Indies, 1 pk. P. & O. Co.

Argols

Italy, 116 pks. Thames S. T. & L. Co., Ld.

Cochineal

Canary Is., 7 bgs. W. M. Smith & Sons
,, 21 Swanston & Co.
,, 118 Hackett, Ausender & Co.
,, 68 sks. Wilson & Coventry

Cutch

U. States, 950 bxs. H. A. Litchfield & Co.

Extracts

France, 31 dms. Carey & Sons
U. States, 50 bxs. W. Burton & Sons
France, 25 cks. Beresford & Co.
Denmark, 1 M. D. Co.
Austria, 68 brls. Fellows, Morton & Co.
,, 300 cks. Boutcher, Mortimore & Co.

Gambier

Straits, 513 bgs. Brinkmann & Co.
,, 256 bls. J. Greig
,, 251 C. S. Lovell
,, 168 Dundee, Perth, and London Shipping Co.
Belgium 18 P. & O. Co.

Indigo

E. Indies, 28 chts. Ralli Brs.
,, 174 Arbuthnot, Latham & Co.
,, 5 J. Kenyon & Sons
Greytown, 15 srns. L. & I. D. Jt. Co.
E. Indies, £251 Parsons & Keith
,, 148 W. J. & H. Thompson
,, 13 chts. L. Archard & Co.
,, £257 L. & I. D. Jt. Co.
,, 143 Croysdale & Co.
,, 37 Thomasset & Co.
,, 130 pks. J. W. Cook & Co., Ld.
Greytown, 27 srns Lewis & Peat
,, 9 W. J. & H. Thompson
Belgium, 2 cs. 2 chts. John Cockerill Line

Myrabolams

E. Indies, 600 bgs. J. Greig
,, 12 Ralli Brs.
,, 335 Marshall & French
,, 610 D. Lascon & Co.
,, 3,750 L. & I. D. Jt. Co.
,, 2,745 Baxter & Hoare

Tanners' Bark

Natal, 58 t. A. & W. Nesbitt
,, 5 Flack, Chandler & Co.
,, 26 J. T. Rennie, Son & Co.
Auckland, 24 Beresford & Co.
France, 6 W. E. Cole
Cape, 27 Hore & Scrivener
Belgium, 33 Leach & Co.
,, 15 c. T. Ronaldson & Co.

Turmeric

E. Indies, 50 bgs. Baxter & Hoare
China, 65 R. Warner & Co., Ld.
E. Indies, 50 Brown & Elmslie
,, 129 L. & I. D. Jt. Co.
,, 50 Anderson, Weber & Smith
,, 182 Wallace Bros.

Valonia

A. Turkey, 52 t. M. D. Co.

Farina—

Holland, 150 bgs. Phillips & Graves
Germany, 50 J. Barber & Co.
U. States, 57 cs. Wingate & Johnston
Holland, 150 bgs. J. Barber & Co.
,, 83 T. H. Lee

Glucose—

France, 40 pks. 40c. J. Barber & Co.
U. States, 50 294 J. Keiller & Son, Ld.

Glue—

Belgium, £420 Capes & Self
France, 86 Mory & Co.
Austria, 320 J. Greig
Belgium, 985 T. M. Duche & Sons
France, 985 ,,
Italy, 550 ,,
Austria, 1,015 ,,
,, 172 Steinhoff, Sons & Co.
Germany, 270 H. Lambert

Glycerine—

Holland, £380 J. Barber & Co.
France, 236 J. W. Cook & Co., Ld.

Guano—

Ichaboe Is., 50 t. R. Bensusan

Gutta Percha—

B. W. I., 11 c. Gillespie Brs. & Co.
,, 21 Perkins & Homer
Straits, 11 t. Lon. & Til. Ltge. C. & D. Co., Ld.
,, 11 Prop. Bull Wf.
,, 11 Kleinwort, Sons & Co.

Iron Oxide—

Germany, 4 cks. H. Lambert

Lithopone—

Holland, 8 cks. H. Keller & Co.

Manganese Ore—

Germany, 5 t. L. & I. D. Jt. Co.
,, 10 C. Hof & Co.

Manure—

Belgium, 1 t. J. E. Kitton
Germany, 5 P. Hecker & Co.
,, 15 Butler's Wf., Ld.
,, 10 H. Lambert
Holland, 4 Little & Johnston
France, 25 W. E. Cole
,, 25 Darling Brs.
E. Indies, 450 A. Hunter & Co.
,, 600 Walker, Howard, & Co.
,, 50 Hollinghurst & Co.
,, 250 Fox, Roy, & Co.

Methyl Alcohol—

Germany, 432 g. W. Iszard
France, 20 dms. E. Catlin
U. States, 26 H. Wallace & Co.
Austria, 31 T. Jones & Co.
,, 1,897 g. D. Thom Domeier & Co.
Belgium, 350 T. Jones & Co.

Molasses—

W. Indies, 44 cks. 520 c. J. W. Cook & Co., Ld.
,, 827 bgs. 1,800 R. & J. J. Kirke
U. States, 200 brls. 1,209 Ohlenschlager Brs.

Ochre—

Holland, 6 pks. Phillipps & Graves
Spain, 44 brls. W. Hinmon
Germany, 4 cks. H. Keller & Co.
France, 125 W. Harrison & Co.

Oxalic Acid—

Holland, 10 pks. R. W. Greeff & Co.

Phosphates—

France, 135 t. A. Hunter & Co.
Belgium, 230 West & Penrose
,, 200 Odams Chemical Manure Co.

Potash—

U. States, 33 brls. Charles & Fox

Potassium Carbonate—

France, 5 t. Petri Brs.

Potassium Oxymuriate—

Sweden, 123 kgs. G. Boor & Co.

Potassium Permanganate—

Germany, 25 kgs. R. W. Greeff & Co.

Potassium Prussiate—

Germany, 3 cks. J. Owen
Holland, 40 kgs. ,,

Potassium Silicate—

Belgium, 8 brls. Price's Pat. Candle Co., Ld.

Pyrites—

Spain, 2,821 t. C. Tennant, Sons, & Co.

Red Lead—

Holland, 21 cks. Burrell & Co.
,, 31 brls. H. B. Alder & Co
Germany, 40 cks. Blundell, Spence, & Co.

Rosin—

France, 12 cks. Burrell & Co.
,, 14 C. W. Schmidt
,, 13 J. Watt & Son
U. States, 100 brls. L. & I. D. Jt. Co.
,, 925 J. Knight & Sons
,, 3,610 T. Nickels & Co.
,, 4,500 F. & S. Chiesman

Saltpetre—

Germany, 60 cks. J. Hall & Son, Ld.
,, 100 bgs D. de Pass & Co
,, 280 H. Grey, junr.
,, 6 cks. L. & I. D. Jt. Co.
,, 16 brls. ,,
,, 16 P. Hecker & Co.
Straits, 37 bgs. Butler's Wf., Ld.
Holland, 105 cks. ,,

Salicylic Acid—

Germany, 12 pks. Butler's Wf., Ld.

Silver Nitrate—

Germany, 1 cs R. W. Greeff & Co.

Soda—

Holland, 5 t. R. W. Greeff & Co.

Soda Crystals—

Belgium, 5 t. A. G. Barker

Sodium Hyposulphite—

Holland, 12 t. R. W. Greeff & Co.

Sodium Nitrate—

Chili, 13,187 bgs. W. Montgomery & Co.

Starch—

Germany, 160 pks. Seaward Brs., Ld.
Belgium, 24 cs. Leach & Co.
,, 280 Becker & Wagner
,, 60 T. Ronaldson & Co.
,, 10 bgs. T. H. Lee
,, 700 cs. ,,
,, 820 E. & T. Pink
,, 525 F. Claydon & Co.
,, 80 C. Tennant, Sons, & Co.
,, 30 J. Harrison
France, 40 W. E. Cole
,, 40 J. Barber & Co.
,, 190 W. H. Carey & Sons
Holland, 30 Phillipps & Graves
,, 10 bgs.
,, 720 cs. A. Starck
,, 191 Little & Johnston
Austria, 60 bgs. C. Tennant, Sons, & Co.
U. States, 12 brls. Taylor Brs.

Stearine—

Holland, 53 brls. J. Owen
,, 20 cks. Robinson, Roberts, & Co
,, 20 T. H. Lee
Germany, 10 trcs. J. Barber & Co.
Belgium, 495 bgs. H. Hill & Sons

Sulphur Chloride—

Holland, 20 blns. Typke & King

Tallow—

Sydney, 50 cks. A. B. Curtis & Co.
,, 157 Lucas & Spencer's Wf.
,, 234 Hoare, Wilson, & Co.
,, 18 Culverwell, Brooks, & Co.
,, 256 Bessler, Waechter, & Co.
,, 608 Phillipps & Graves
,, 327 J. R. Francis & Co.
,, 38 Dalgety & Co., Ld.
,, 143 Deering & Robottom
,, 99 Beresford & Co.
,, 42 J. W. Cook & Co., Ld.
,, 270 L. & I. D. Jt. Co.
N. Zealand, 40 N. M. & A. Co.
,, 44 Phillipps & Graves
,, 44 Flack, Chandler, & Co
,, 31 J. Graves
,, 116 Dalgety & Co., Ld
,, 14 Brown & Elmslie
,, 60 J. W. Cook & Co., Ld.
,, 90 J. Owen
,, 8 Deering & Robottom
,, 38 Low, Sons, & Bedford
,, 20 N. Z. L. & M. A. Co.
N. Zealand, 7 cks. J. Greig
U. States, 300 brls. Price's Pat. Candle Co., Ld.
China, 30 cs. J. Swire & Sons
Queensland, 24 cks. Perkins & Homer

Tartar—

France, 66 cks Lon & Til. Ltge. C. & D. Co.

Tartaric Acid—

Spain, 16 pks. W. C. Bacon & Co.
Holland, 18 Kirkpatrick, Barr, & Co.
Belgium, 10 B. & F. Wf. Co., Ld.

Ultramarine—

Holland, 2 cks. H. Keller
,, 5 J. Owen
,, 5 W. Harrison & Co.
,, 2 pks. J. Barber & Co.
Germany, 2 cks. Argo S. S. Co.

Varnish—

Belgium, 5 pks. Leach & Co.
,, 2 T. H. Lee
France, 16 Taylor Brs.
Germany, 21 Butler's Wf., Ld.

White Lead—

Holland, 20 cks. Perkins & Homer
,, 45 D. Storer & Sons
,, 20 J. R. Francis & Co.
Germany, 47 Taylor Brs.
Belgium, 11 T. & W. Farmiloe, Ld.
,, 67 J. L. Lyon & Co.
,, 21 Fleming's Oil & Chemical Co.

Wood Pulp—

N. Russia, 104 pks. Thames S. T. & L. Co., Ld.
Sweden, 640 Alsing & Co., Ld.
,, 160 Johnsen & Jorgensen
,, 510 J. W. Cook & Co., Ld.
,, 204 H. Raby & Mather
,, 520 Phillipps & Graves
Norway, 1,760 Christophersen, Andrews, & Co.
,, 305 W. E. Bott & Co.
,, 160 Christophersen, Andrews, & Co.
,, 3,910 London Paper Mills Co.
Germany, 76 Bailey & Leetham
,, 400 J. Graves
,, 80 Butler's Wf., Ld.
Holland, 38 Henderson, Craig, & Co.
U. States, 2,602 ,,
,, 252 W. G. Taylor & Co., Ld.
Canada, 757 A. E. Reed & Co.
,, 1,391 Furness, Withy, & Co.
Belgium, 2,026 J. Harrison

Zinc Chloride—

Germany, 3 cks. H. Wallace & Co.

Zinc Oxide—

Holland, 75 cks. Burrell & Co.
Belgium, 5 Sawer, Sons, & Co.
Germany, 500 Soundy & Sons
U. States, 200 M. Ashby, Ld.
,, 150 brls. ,,

Zinc Sulphate—

Germany £65 F. Smith

Zinc White—

Holland, 20 cks. J. Owen
Germany, 23 O'Hara & Hoar

LIVERPOOL.

Week ending March 9th.

Acetate of Lime—

New York, 5,842 bgs.

Aluminium Sulphate—

Rotterdam, 26 cks.

Ammonia—

Amsterdam, 2 crbys.

Antimony—

Valparaiso, 192 sks. Kleinwort, Sons & Co.

Barytes—

Rotterdam, 23 cks.

Bones—

Smyrna, 1,150 bgs.
Alexandria, 50 t.
Acre, 450 bgs.

Boracic Acid—

Leghorn, 20 cks.

Caoutchouc—

Valparaiso, 59 brls. J. H. Schroeder & Co.
Havre, 29 pks. Cunard S. S. Co.

Castor Oil—

Leghorn, 17 cs.

China Clay—
Hamburg, 10 crts.
Colours—
Rotterdam 4 cks. 5 cs.
Cottonseed Oil—
New York, 700 brls.
Pensacola, 250
Cream of Tartar—
Barcelona, 5 butts
Tarragona, 15 cks.
Bordeaux, 5 cs.
Dyestuffs—
Cochineal
Teneriffe, 9 bgs. Rullman & Co.
Catch
Rangoon, 587 bxs.
Amsterdam, 750
Extract
New York, 145 brls. McArthur & Co.
" 50 J. Sharley & Co
Bordeaux, 190 cks. J. R. Francis & Co.
Baltimore, 80 brls.
" 25 McArthur & Co.
Havre, 4 cks. Cunard S. S. Co.
Philadelphia, 550 brls.
Logwood
Smyrna, 50 bgs.
Valonia
Odessa, 750 bgs. J. Tekean
Smyrna, 2,335 kntls. G Essayan
Farina—
Havre, 100 pks. Cunard S. S. Co.
Glucose—
New York, 750 brls T. M. Duche & Sons
Boston, 650
St. John, 50 50 cks. Glucose S. Refg Co
Litharge—
Rotterdam, 1 ck.
Manganese Ore—
Bahia, 738 t. R. & D. Jones
Molasses—
Alexandria, 505 cks.
Paint—
Amsterdam, 20 dms
Paraffin Wax—
Philadelphia, 50 brls.
Baltimore, 401
Phosphates—
Pensacola, 4 3 t. 10 c. Goldstuck, Hainze & Co.
Potash—
Hamburg, 10 cks.
Pyrites—
Huelva, 1,605 t. Mathieson & Co
Rosin—
Savannah, 7,926 brls.
Saltpetre—
Hamburg, 10 kgs.
Soap—
New York, 1,000 bxs.
Hamburg, 1 cs.
Naples 78
Soap Stock—
Leghorn, 50 brls. Brown Brs. & Co.
" 50 Baring Brs & Co.
Soapstone—
Bordeaux, 200 bgs. Geo. G. Blackwell, Sons & Co.
Starch—
Amsterdam, 7 cs
Rotterdam, 70
New York, 40 brls. Amblet, Harry & Co.
Stearine—
St. John, 30 tcs. Chicago Packing Co.
Sulphur—
Catania, 100 bgs. 34 brls.
Tallow—
New York, 275 tcs. Colby & Co.
" 63
Pensacola, 649 brls.
Portland, 55
Boston, 513 40 hhds.
B. Ayres, 250 pps. Ldn. & Brazil Bank, Ld
" 320 cks.
Tartaric Acid—
Bordeaux, 10 cks.
Rotterdam, 4
Turpentine—
Savannah, 600 brls.
Ultramarine—
Rotterdam, 40 cks.
White Lead
Rotterdam, 73 cks
Wood Pulp—
Rotterdam, 393 bls.
Halifax, 1,140 Mar. Sulph. Fibre Co
Zinc White—
Rotterdam, 7 cks.

MANCHESTER.

Week ending March 11th.

Acetate of Lime—
New York, 56 bgs
Acetone—
Hamburg, 1 ck.
Antimony Salt—
Rotterdam, 8 cks.
Barytes—
Antwerp, 20 bgs.
Hamburg, 20 cks
Rotterdam, 100 bgs.
Chemicals *(otherwise undescribed)*
New York, 10 cks.
Rotterdam, 3
Coal Products—
Aniline
Antwerp, 8 brls.
Aniline Salts
Rotterdam, 23 cks
Tar Oil
Antwerp, 2 tins
Colours—
Antwerp, 3 brls. 16 pks.
Hamburg, 13 cks. 5 cs.
Rotterdam, 191 32 14 bxs 410 brls.
Cream of Tartar—
Rotterdam, 13 cks.
Dyestuffs—
Extracts
Antwerp, 6 brls.
New York, 50 bxs.
Indigo
Rotterdam, 12 cks. 6 chts.
Farina—
Rotterdam, 500 bgs. W. N. Jackson
Glue—
Antwerp, 9 cks. 70 bls.
Hamburg, 30 bgs.
Rotterdam. 60
Glue Stock—
Hamburg, 15 bls.
Oxalic Acid—
Rotterdam, 30 cks
Paint—
Hamburg. 10 brls.
Paraffin Wax—
New York, 1,320 brls.
Potash—
Hamburg, 10 cks.
Potassium Chlorate—
Hamburg. 14 cks.
Potassium Oxalate—
Rotterdam, 5 cks.
Rosin
Hamburg. 1 cs.
Salammoniac—
Antwerp, 20 brls.
Soap—
New York, 853 brls. 1 000 bxs.
Rotterdam, 5 cs.
Starch—
Antwerp, 823 cs.
Hamburg, 181
New York, 125 bgs.
Rotterdam, 40 191
Stearine—
Antwerp, 63 bgs.
Rotterdam, 13 bls.
Tallow—
New York 100 tcs.
Tannin—
Rotterdam. 5 cks.
Tartaric Acid—
Rotterdam, 20 kgs. 4 cks.
Ultramarine—
Hamburg, 13 cks.
Rotterdam, 10 cs.
Wood Pulp—
Drammen, 2,870 bls. Felter, Jucker, & Co
Hamburg, 1 pk.
Rotterdam. 10 42 115 rolls
Skien, 1,000 bls. Felter, Jucker, & Co.
Zinc Oxide—
Rotterdam, 65 brls.

HULL.

Week ending March 11th.

Acetate of Lime—
New York, 300 bgs. Wilson, Sons, & Co., Ld.
Antimony—
Dunkirk, 1 cs Wilson,
2 cks. Sons, & Co., Ld.
Leghorn, 20 "
Barytes—
Amsterdam, 94 cks Hull & Netherlands S. S. Co
Antwerp, 40 Bailey & Leetham, Ld
90 bgs. Leetham, Ld
36 cks. H. F. Pudsey
" 200 bgs.
Bremen, 80 cks. Sissons Brs & Co.
" 19 G. Holmes & Co.
" 39 pks.
" 41 cks.
Hamburg, 3
Rotterdam, 42 Hull & Netherlands S. S. Co
Bone Ash—
Hamburg, 2 bgs. Wilson, Sons, & Co., Ld.
Castor Oil—
Marseilles, 54 cks.
Chemicals *(otherwise undescribed)*
Antwerp, 2 cks. Bailey & Leetham, Ld
" 60 pks. Wilson, Sons, & Co., Ld.
Dunkirk, 1 ck. "
Hamburg, 5 Bailey & Leetham, Ld.
Marseilles, 10 Wilson, Sons, & Co., Ld.
New York, 11
Stettin, 45 "
Coal Products—
Alizarine
Rotterdam, 9 brls. Hull & Netherlands S. S. Co.
" 14 pks.
Aniline
Antwerp. 1 cs. Wilson, Sons, & Co., Ld.
Rotterdam, 74 pks. Hull & Netherlands S. S. Co.
Aniline Colours
Rotterdam, 11 pks.
Beta Naphthol
Rotterdam, 1 brl. Hull & Netherlands S. S. Co.
Pitch
Libau, 50 cks.
Tar
Libau, 3 cks.
Colours—
Antwerp, 26 pks. Wilson, Sons, & Co. Ld.
Bremen, 2 cs. J. Pyefinch & Co.
Ghent, 20 cks. Wilson, Sons & Co., Ld.
Rotterdam 51 pks. 36 cks. 66 brls. Hull & Netherlands S. S Co
Rouen, 34 cks.
Stettin. 6
Dyestuffs—
Extracts
Dunkirk, 14 cks. Wilson, Sons, & Co., Ld.
New York, 50 brls. "
Indico
Rotterdam, 5 brls. Hull & Netherlands S. S. Co.
" 100
Valonia
Smyrna, 910 bgs. Wilson, Sons. & Co., Ld.
" 350 t.
Dyewood—
Hamburg, 30 bgs. Wilson, Sons, & Co., Ld.
Farina—
Stettin, 550 bgs.
Glucose—
New York, 790 brls.
Stettin, 200 bgs. Wilson, Sons, & Co., Ld.
Glue—
Christiania, 100 bgs.
Rotterdam, 2 1 cs. 3 bls. Hull & Netherlands S. S. Co.
Lithopone—
Amsterdam, 60 cks. Hull & Netherlands S. S. Co.
Ochre—
Marseilles, 76 cks.
Paraffin Wax—
New York, 855 brls.
Phosphates—
Dunkirk, 280 t.
Ghent, 162
Potassium Sulphate—
Rotterdam, 4 cks. Hull & Netherlands S. S. Co.
Pyrites—
Huelva, 1,471 t.
Red Lead—
Amsterdam, 8 cks. Hull & Netherlands S. S. Co.
Soap—
Marseilles, 13 cs. Wilson, Sons, & Co., Ld.
" 2 cks.
Naples, 94 cs. "
New York, 100 bxs.
Soda—
Antwerp, 265 bgs. Wilson, Sons. & Co., Ld.
Ghent, 50
Starch—
Amsterdam, 248 cs. Hull & Netherlands S. S. Co.
Antwerp, 40 Bailey & Leetham, Ld.
" 40 O. S. Stephenson & Co.
Bremen, 2,558 Veltmann & Co.
Ghent, 291 bxs. Wilson, Sons, & Co., Ld.
Tallow—
Antwerp. 31 bgs. Wilson, Sons, & Co., Ld.
Dunkirk, 336 cks. "
60
New York, 382 brls. "
275 cks.
" 67 hds.
Tartaric Acid—
Rotterdam, 16 cks.
Ultramarine—
Bremen, 8 cks J. & T. Seddon
" 8
Waste Salt—
Hamburg, 800 bgs. Bailey & Leetham, Ld.
" 1,027
White Lead—
Amsterdam, 50 cks. Hull & Netherlands S. S. Co.
Antwerp 72 Bailey & Leetham, Ld.
Rotterdam, 60 cks. Hull & Netherlands S. S. Co.
Wolfram—
Hamburg, 10 cs. Wilson, Sons, & Co., Ld.
Wood Pulp—
Bergen, 80 pks. Wilson, Sons. & Co., Ld
Christiania, 68 "
" 520
Drontheim. 1,170 bls. "
Gothenburg, 49 pks. 682 bdls. "
Hango, 150 bls. J. Good & Sons
" 256
Hamburg, 120 Bailey & Leetham, Ld.
Zinc Oxide—
Antwerp, 137 cks. Bailey & Leetham, Ld.
Hamburg, 3 G. Becker
Zinc Sulphate—
Rotterdam, 2 brls. Hull & Netherlands S. S. Co.

GLASGOW.

Week ending March 16th.

Alizarine—
Rotterdam, 3 cks. 29 brls. J. Rankine & Son
Antimony Salt—
Rotterdam, 10 crbys. J. Rankine & Son
Barium Chloride—
Rotterdam, 4 cks. J. Rankine & Son

Barium Sulphate—
Antwerp, 900 bgs. 21 cks.
Barytes—
Rotterdam, 86 pks.
Hamburg, 64 cks.
Boracic Acid—
Leghorn, 6 brls.
Castor Oil—
Genoa, 5 cs.
Leghorn, 5
Marseilles, 30 cks.
Chalk—
Leghorn, 7 cs.
Chemicals *(otherwise undescribed)*
Rotterdam, 3 cks. 8 cs. J. Rankine & Son
Coal Products—
Aniline
Rotterdam, 6 cks. J. Rankine & Son
Aniline Colours
Hamburg, 9 cks. 3 cs.
Colours—
Rotterdam, 3 cks. 9 cs. / 3 bxs. 3 brls. / 137 pks. J. Rankine & Son
Copper Pyrites—
Huelva, 1,712 t. Tharsis Co.
Cream of Tartar—
Bordeaux, 7 cks.
Dyestuffs—
Cutch
Rangoon, 250 bxs 1,700 cs. P. Henderson & Co.
Extract
New York, 50 brls.
Baltimore, 10
Indigo
Rotterdam, 7 chts. J. Rankine & Son
Dyewood Extract—
New York, 24 brls.
Rotterdam, 1 ck. J. Rankine & Son
Farina—
Delfszyhl, 950 bgs. J. Rankine
Glucose—
New York, 300 brls.
Baltimore, 500
St. John, 150
Newport News, 1,050
Glue—
New York, 1 bx.
Rotterdam, 40 bgs. J. Rankine & Son
Hamburg, 41
Paint—
Genoa, 20 cs
Phosphates—
Antwerp, 1,010 bgs.
Red Lead—
Rotterdam, 6 cks. J. Rankine & Son
Saltpetre—
Hamburg, 100 sks.
Soap—
Baltimore, 197 brls.
Soda—
Rotterdam, 12 cks J. Rankine & Son
Genoa, 25 brls.
Sodium Nitrate—
Rotterdam, 19 cks. J. Rankine & Son
Starch—
New York, 1,000 bxs.
St. John, 200 bgs.
Antwerp, 4 28 cs.
Baltimore, 725
Stearine—
New York, 2 hhds.
Tallow—
New York, 50 tcs.
Tartar—
Bordeaux, 2 cks.
Oporto, 6
Tartaric Acid—
Rotterdam, 6 cks. J. Rankine & Son
Ultramarine—
Antwerp, 30 cs.
Varnish—
New York, 145 brls.
Waste Salt—
Hamburg, 500 bgs. 151 t.
White Lead—
Rotterdam, 23 cks. J. Rankine & Son
55 pks.
Wood Pulp—
New York, 916 rolls
St. John, 3,408 bls.
Gothenburg, 518 10
Christiania, 283 11 cs.
Zinc Oxide—
New York, 270 brls.
Antwerp, 12 cks.
Zinc White—
Dunkirk, 25 cks.

TYNE.

Week ending March 11th.

Antimony Ore—
Hamburg, 100 cs. Tyne S. S. Co.
Barytes—
Antwerp, 500 bgs. Tyne S. S. Co.
Rotterdam, 261 bgs. 26 cks. "
Borax—
Frederikshavn, 1 cs.
Chemicals *(otherwise undescribed)*
Rotterdam, 10 cks. Tyne S. S. Co.
Colours—
Antwerp, 2 cks.
Glue—
Rouen, 4 cks. J. Brown & Co.
Glycerine—
Hamburg, 5 cs. Tyne S. S. Co.
Manganese Ore—
Rotterdam, 300 t.
Ochre—
Rouen, 244 cks. W. Young & Co.
Paint—
Christiania, 98 tins
Pyrites—
Huelva, 2,964 t. Tharsis Sulphur & Copper Co.
Saltpetre—
Hamburg, 20 kgs. Tyne S. S. Co.
Saltpetre Salt—
Hamburg, 650 t. Clephans & Wiencke
Soap—
Rotterdam, 2 cs. Tyne S. S. Co.
Starch—
Rotterdam, 198 cs. Tyne S. S. Co.
White Lead—
Antwerp, 22 cks. Tyne S. S. Co.
Wood Pulp—
Bergen, 79 bls.
Christiania, 935
Laurvig, 25
Rotterdam, 104 Tyne S. S. Co.
Zinc Chloride—
Rotterdam, 20 tins Tyne S. S. Co.
Zinc Sulphate—
Gothenburg, 80 bgs.

GOOLE.

Week ending March 8th.

Acetic Acid—
Rotterdam, 5 cks. 14 cs.
Antimony—
Boulogne, 1 ck.
Barytes—
Antwerp, 17 cks.
Caoutchouc—
Boulogne, 4 cks. 1 cs.
Chemicals *(otherwise undescribed)*
Hamburg, 6 bgs.
Coal Products—
Alizarine
Rotterdam, 23 cks. 8 cs.
Aniline
Hamburg, 3 cks.
Rotterdam, 466 99 cs.
Colours—
Hamburg, 2 cs.
Dyestuffs *(otherwise undes.)—*
Amsterdam, 1 ck.
Boulogne, 24 86 pks.
Dyestuffs—
Extracts
Hamburg, 76 cks.
Farina—
Delfszyhl, 50 bgs.
Hamburg, 200
Glue—
Antwerp, 2 cks.
Boulogne, 5
Glycerine—
Hamburg, 4 dms
Phosphates—
Calais, 2,550 bgs.
Ghent, 808
Potash—
Antwerp, 1 ck.
Calais, 68 dms.
Hamburg, 4
Potassium Sulphate—
Dunkirk, 2 cks. 20 dms.
Saltpetre—
Antwerp, 170 bgs.
Tartar—
Rotterdam, 5 cks.
Waste Salt—
Hamburg, 150 t.

GRIMSBY.

Week ending March 11th.

Caoutchouc—
Antwerp, 3 cs.
Chemicals *(otherwise undescribed)*
Esbjerg, 1 cs.
Hamburg, 4 cks.
Coal Products—
Pitch
Hamburg, 106 cks.
Colours—
Antwerp, 5 cks. 93 pks.
Hamburg, 10 bgs. 3 cs. / 52 cks. 225
Rotterdam, 17
Farina—
Hamburg, 50 bgs.
Glue—
Hamburg, 5 cks.
Saltpetre—
Hamburg, 100 bgs.
Turpentine—
Antwerp, 1 cs.

EXPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending March 15th.

Alkali—
Delagoa Bay, 1 t. £14
Ammonia—
Hankow, 9 cs. £11
Ammonia (Anhydrous)—
Sydney, 100 cyldrs. £350
Cologne, 50 110
Ammonium Carbonate—
Melbourne, 20 cs. £30
New York, 25 cks. 170
Hamburg, 16 / 8 t. 18 c. 272
Rouen, 5 9 130
Bremen, 10 brls. 27
Ammonium Muriate—
Melbourne, 2 t. 2 c. £38
Ammonium Sulphate—
Ghent, 80 t. £821
Valencia, 192 11 c. 1,900
Antwerp, 100 1,057
Ostend, 245 2,508
Dunkirk 180 1,883
Antimony Sulphide—
Boulogne, 10 c. £80
Bleaching Powder—
E. London, 2 t. £15
Bombay, 3 10 c. 33
Bone Ash—
E. London, 2 t. 8 c. £52
Delagoa Bay, 1 10 30
Boracic Acid—
Melbourne, 2 t. £50
Borax—
Amsterdam, 10 c. £25
Townsville, 4 t. 4 73
Gibraltar, 12 brls. 12
Calcium Bisulphite—
Dunedin, 19 c. £6
Carbon Bisulphite—
Durban, 19 c. £12
Sydney, 50 dms. 23
Carbonic Acid Gas—
Channel Is., 34 tubes £13
Cape Town, 4 cs. 18
Caustic Potash—
Sydney, 2 t. 4 c. £70
Adelaide, 4 6
Caustic Soda—
Durban, 15 c. £10
Christchurch, 5 t. 8 47
Sydney, 12 7
Canterbury, 11 31
Adelaide, 2 4
Melbourne, 16 12
Durban, 4 7
Chemicals *(otherwise undescribed)*
Bremen, 20 cks. £158
Sydney, 10 cs. 9 pks. 34
Rotterdam, 7 kgs. 1 60
Amsterdam, 6 36
Brussels, 15 91
Calcutta, 6 44
Dunkirk, 21 dms. 75
Colombo, 1 12
Sydney, 14 9 pks. 62
Hamburg, 30 175
Pt. Elizabeth, 8 15
Paris, 5 24
Brussels, 1 25
Toronto, 53 59
Wellington, 80 37
Las Palmas, 5 —
Halifax, 10 hhds. —
Marseilles, 14 —
Teneriffe, 10 t. 56
Antwerp, 37 103
Launceston, 8 79
Melbourne, 4 272 246
Mombassa, 8 12
Windsor, Ont., 10 cks. 25
Townsville, 14 29
Sourabaya, 2 12
St. John, N.B., 6 15
Halifax, 10 kgs. 32
Brisbane, 20 10 47
Citric Acid—
E. London, 1 c. £7
Durban, 4 29
Alexandria, 4 16
Lisbon, 10 cks. 32
Valparaiso, 2 14
Calcutta, 2 25
Coal Products—
Alizarine
Boston, 10 cks. £150
Aniline
Sydney, 1 cs. £18
Calcutta, 2 79
Aniline Oil
New York, 12 dms. £336
Benzol
Cologne, 160 cks. £345
Carbolic Acid
Toronto, 6 cks. £34
New York, 60 226
Boca, 7 crates 48
Coal Tar Dyes
Boulogne, 3 cks. 2 bgs. £45
Creosote
Dieppe, 79,355 galls. £416
Creosote Salts
Smyrna, 95 cks. £44
Naphtha
Melbourne, 50 dms. £52
Naphthaline
New York, 30 cs. £80
Paris, 130 bgs 30 cks. 159
Hamburg, 5 47
Rotterdam, 6 9

Pitch
B. Ayres, 5 cs. £14
Dunkirk, 150 t. 225
Sables d'Olonne, 1,131 2,415
Hochfeld, 110 121
Cette, (in bulk) 1,800
Alexandria, 550 brls. 199
Hamburg, 28 cks. 34
Rotterdam, 196 462
M. Video, 15 7
Amsterdam, 723 t. 877
Antwerp, 2,059 2,325
Pyridine Bases
Cologne, 24 cks. £250
Rotterdam, 24 240
Tar
Trinidad, 11 brls. £6
Portland, 100 25
Madras, 9 6
Danzig, 10 cks. 50
Delagoa Bay, 200 dms. 26
Hamburg, 250 113
Tar Oil
Hamburg, 15 cks. £24

Coal Products (*otherwise undes.*)—
Las Palmas 5 dms. £8

Copper Sulphate—
Bari, 5 t. £125
Algiers, 10 252
Vigo, 2 13 60
Las Palmas, 5 6
Piræus, 1 1 27
Seville, 1 14 34

Corrosive Sublimate—
Bombay, 1 t. £260

Cream of Tartar—
Sydney, 1 t. £75
Melbourne, 2 10 c. 20 kgs. 264
Brisbane, 1 3 80

Disinfectants—
Paris, 15 cks. £20
Durban, 40 10 cs. 200 dms. 84
Melbourne, 4 50 55
Sydney, 10 21
Brisbane, 10 50 22
Jamaica, 102 94
Cape Town, 40 14
Brisbane, 50 —
Dieppe, 25 37
Bombay, 12 kgs. 27
Delagoa Bay, 5 pks. 60
Rangoon, 11 12

Dried Blood—
New York, 5 t. £210

Manure—
Madeira, 3 t. £13
Demerara, 80 710
Havre, 25 80
Bordeaux, 30 160
Java, 66 730
San Francisco, 1 16 c. 30
Honolulu, 579 5,993
Cape Town, 100 775
Rochefort, 103 340
Rouen, 6 50
Hamburg, 5 20
Pt. Elizabeth, 2 19

Oxalic Acid—
Melbourne, 1 t. £30

Oxygen—
Amsterdam, 1 cs. £14

Phosphorus—
E. London, 2 cs. £22

Phosphoric Acid—
New York, 23 cs. £90

Potassium Chlorate—
Karachi, 3 c. £9
E. London, 1 t. 5 45

Potassium Cyanide—
Vancouver, 3 t. £315
Auckland. 5 502
Townsville, 15 1,800
Fremantle, 6c cs. 633
Sydney, 12 140
Adelaide, 10 129
New York, 2 212
Durban, 20 215
Melbourne, 2 196
Delagoa Bay, 48 50 5,120

Sal-ammoniac—
Batoum, 12 c. £20
Trebizonde, 1 t. 33
Melbourne, 1 36

Salt petre—
Sydney, 2 t. £45
Brisbane, 2 40
Dunedin, 1 20
Lyttelton, 10 c. 10
Melbourne, 4 85
Rio de Janeiro, 2 4 49
Syra, 2 15 55

Sheep Dip—
San Francisco, 6 c. £9
Durban, 1,000 kgs. —
B. Ayres, 14 t. 13 c. 305 dms. 316
Brisbane, 5 10
E. London. 30 37
London, Ont., 5 cks. 10
Sydney, 1 t. 9 10

Soda—
Gibraltar, 1 t. £7
Alexandria, 1 1 c. 7
Cape Town, 1 15 11

Sodium Acetate—
Dunedin, 10 c. £11

Sodium Bicarbonate—
Brisbane, 7 c. £7
Las Palmas, 6 —
St. John, N.B., 4 10

Sodium Prussiate—
Antwerp, 5 t. 2 c. £238
Reval, 5 10 290

Sodium Tartrate—
Montreal, 1 t. 2 c. £74
St. John, N.B., 6 10

Sulphur—
Cape Town, 2 t. £13
Lisbon. 8 17 c. 148 brls. 192

Sulphuric Acid—
Karachi, 3 t. 10 c. £35

Superphosphates—
Adelaide, 300 t. —

Tartaric Acid—
Brisbane, 11 c. £60

LIVERPOOL.

Week ending March 15th.

Acetic Acid—
Vera Cruz, 13 c. £16

Alum—
Santos, 1 t. 8 c. 1 q. £7
Bahia, 1 10 8
Sydney, 2 10 14
Adelaide, 1 5 6
Rangoon, 6 17 38
Melbourne, 5 4 26
Callao, 2 15 2 13
Madras, 17 7 3 97

Ammonium Carbonate—
Pernambuco, 10 cs. £30
Fairwater, 1 t 27
Marseilles, 1 27
Para, 1 c. 2 q. 5
Barcelona, 1 2 5

Ammonium Muriate—
Melbourne, 2 cks. £19

Ammonium Sulphate—
Valencia, 66 t. 13 c. £695
Cullera. 91 12 950
Teneriffe, 5 53
Las Palmas 51 7 541
Leghorn, 98 19 3 q. 979
Samarang, 102 11 3 1,025
Alicante, 50 400
San Francisco, 100 2 1,075
Philadelphia, 49 15 528

Arsenic—
Rouen, 3 t. 4 c. £53
Newport News, 2 14 48
Singapore. 5 5

Basic Slag—
Demerara, 200 t. £460

Bleaching Powder—
Amsterdam, 131 cks.
Antwerp, 15
Boksburg, 20 dms.
Bombay, 8 cs. 10 bxs.
Boston, 377 93 bls.
B. Ayres, 9
Cambrai, 18
Cape Town, 60
Cleveland, 20
Genoa, 257
Ghent, 15
Gothenburg, 38
Hamburg, 61
Johannesburg, 138
Leghorn, 26
Maranham, 12
Miamisburg, 18
Milwaukee, 131
Muncie. 67
Naples. 18
New York, 263
Rotterdam, 153
San Sebastian, 57
Seville. 93
Wabash, 45
Windsor Mills, 13

Boracic Acid—
Bombay, 4 c. 2 q. £7
Montreal, 2 t. 9 1 67
Shanghai, 5 7

Borax—
St. John, 3 t. £48
Melbourne, 2 29
Rotterdam, 13 c. 3 q. 12
Hamburg, 1 1 3 17
New York, 16 3 11
Shanghai, 1 5 22
Kingston, Ja., 5 3 5
Genoa, 4 3
Hamilton, 10 165
London, 25 375

Calcium Chloride—
Hong Kong, 3 t. 1 c. £7
Odessa, 20 1 42
Rouen, 9 19 21
Boston, 26 5 49
Melbourne, 2 13 6
Sydney, 10 22
Amsterdam, 26 1 58

Carbolic Acid—
Rouen, 17 t. £835
Barcelona, 1 2 c. 56
Lagos, 30 dms. 24
Kobe, 3 2 146
Hiogo, 1 4 3 q. 59
Melbourne, 3 11 2 105
Rotterdam, 5 3 126
Philadelphia, 11 6 200

Castor Oil—
Demerara, 20 cs.
Valparaiso, 2 dms.

Caustic Potash—
Palermo. 8 c. £10
New York, 8 t. 18 22½
Melbourne, 1 1 26

Caustic Soda—
Algoa Bay, 5 dms.
Alicante, 70 15 cks 35 pks.
Amsterdam, 349
Antwerp, 35 28
Bahia, 5
Barcelona, 80
Barranquilla, 10
Bombay, 21
Boston, 50
Braila, 150
B. Ayres, 133
Calcutta, 144
Callao, 40
Cartagena, 42
Champerico, 25
Corunna, 20 brls.
Dunedin, 39
E. London, 11 cs.
Galatz, 312
Genoa. 141
Geraldton, 33
Hamburg, 4
Havana, 90
Hiogo. 200
Hong Kong, 61
Jaffa, 108
Johannesburg, 80
Kavalla, 6
Kington, 12
La Guayra, 10
Leghorn, 138
Libau, 21
Malaga, 28 85
Marseilles, 30
Melbourne, 100
M. Video, 50
Naples, 30
New York, 600 100 brls.
Oporto, 15
Osaka, 50
Panama, 10
Penang, 10
Philadelphia, 50 32 tcs.
Porto Alegre, 20
Rotterdam, 93 6 cks. 48
Rouen, 122
San Jose de Guatemala, 25
San Sebastian, 60
Santander, 6
Santiago, 5
Seville, 194 75 brls. 25 kgs.
Sourabaya, 152
Sydney, 95
Stettin, 27
Toronto, 35
Toronto Junct., 50
Valencia, 52
Vancouver, 30
Vigo, 30
Yokohama, 200

Chemicals (*otherwise undescribed*)
Antwerp, 4 t. £6
Ponce, 2 kgs. 3
Campana, 2 cs. 16
Alexandretta, 8 brls. 33
Bombay, 50 234
Rangoon, 5 24
Melbourne, 2 cks. 16
Cairo, 11 33
Genoa, 9 77
Karachi, 5 24
Madras, 5 1,354
Havana, 7 3 1 q. 22
Philadelphia, 12 6 332
Grenoble, 1 28
Odessa, 3 80

China Clay—
Baltimore, 750 cks.
Barcelona, 20
Bombay, 120 05 bgs.
Boston, 925
Newport News, 199
Portland, M., 1,780
Vera Cruz, 62

Coal Products—
Aniline Colour
New York, 26 cks.
St. John, N.B., 4
Aniline Dye
Barcelona, 10 brls, 2 cs.
Calcutta, 4
Aniline Salt
Alexandria, 8 kgs.
Boston, 26 cs.
Constantinople, 13 cks.
Lisbon, 1
Salaverry 1
Vera Cruz, 20 kgs.
Creosote Oil
Bordeaux, 300 cks. 250 brls.
Naphtha
Melbourne, 57 dms.
Pitch
Rouen, 2 cks.
Tar
Bilbao, 4 cks.
Havana, 10 brls.
Johannesburg, 600 dms.

Copperas—
M. Video, 8 t. 10 c. 3 q. £17
Vigo, 3 16 45

Copper Sulphate—
Cette, 38 t. 7 c. 1 q. £950
Genoa. 345 2 2 5,960
Venice, 429 17 7,758
Naples. 164 14 2,950
Bordeaux, 653 7 1 12,946
Leghorn, 185 12 3 3,218
Palermo, 5 2 2 90
Brindisi, 20 1 341
Seville, 7 5 220
Vigo, 35 16 3 849
Rouen, 5 12 2 93
Galatz, 1 19 3 35
Algiers, 4 19 98
Phillipville, 5 19 113
Lisbon. 24 16 554
La Pallice, 24 16 625
Rotterdam, 10 12
Nantes, 56 1,151
Catania, 19 15 1 369
Trieste, 54 17 1,104
Rio de Janeiro, 10 7
Christiania, 9 3 9
Bone 3 6 66
Marseilles, 29 14 674
Bayonne, 4 16 3 91
Bari, 35 4 2 757
Catacola, 18 2 404
Zante, 2 1 1 43
Lisbon, 30 2 628
M. Video, 4 13 2 100
Ancona, 24 17 3 510
Almeria, 9 19 2 175
Messina, 5 94

Disinfectants—
St. John, 6 pks. £6
Calcutta, 2 t. 10 c. 12
Sydney, 12 3 q. 5
Rangoon, 9 cks. 15 cs. 151

Guano—
Valencia, 82 t. £645

Magnesia—
B. Ayres, 7 pks.
New York, 10 cs.
Paris, 40
Toronto. 10

Magnesium Sulphate—
Lisbon, 75 bgs.
Seville, 25 brls.

Manganese Oxide—
Antwerp, 12 c. £6

Manure—
Barcelona, 24 t. 17 c. £130
Las Palmas. 15 15 90

Muriatic Acid—
Campana, 15 c. 2 q. £27

Naphylamine—
Milan, 5 cks.

Nitric Acid—
Campana, 6 c. 2 q. £16
Oxalic Acid—
Genoa, 6 c. £10
Boston, 14 t. 15 390
Paint—
Alicante, 4 dms.
Antwerp, 4 cks.
Benguella, 19 pks.
Benin, 8 dms.
Caiffa, 6 kgs.
Calcutta, 106
Campana, 1 cs.
Cape Town, 20
Cartagena, N.G., 108
Cienfuegos, 1 ck.
Gibraltar, 5 cks.
Havana, 15
Lisbon, 36 pks
Loanda, 50
Manila, 4 cks.
Maranham, 2
Messina, 4
Matanzas, 1
Nassau, 100 19
New York, 1
Para, 10
Pernambuco, 10
Rio de Janeiro, 10 24
San Juan, 4
Sierra Leone, 110
Sourabaya, 200
Sydney, 8 12
Tampico, 7
Painters' Colours—
Boston, 260 pks.
Bremen, 302
B. Ayres, 15
Callao, 6 cks.
Canea, 132 kgs. 1 brl.
Ceara, 3 cks.
Coquimbo, 7 cs.
Gijon, 4
Hamburg, 1
Havana 2 brls.
Johannesburg, 2
Lisbon, 3 2
Manila, 6
Maranham, 5
Mauritius, 500 kgs. 125 dms.
M. Video, 24 crts.
Nassau, 7
Para, 7 44
7 cks. 10 brls.
5 tcs.
Penang, 4
Pt. Elizabeth, 16 cs.
Talcahuano, 16
Paraffin Wax—
Pari-, 20 cs.
San Sebastian, 20 bgs.
Sourabaya, 15 dms.
Vigo, 10
Volo, 10
Phosphorus—
St. John's, N'fd., 3 cs. £25
Vera Cruz, 4 37
Picric Acid—
San Francisco, 5 t. £470
Potash—
B. Ayres, 1 t. 15 c. 1 q. £19
Potassium Bicarbonate—
New York, 4 t. 6 c. £112
Potassium Bichromate—
Alexandria, 8 c. £13
Messina, 1 t. 2 40
Paris, 5 4 3 q. 180
Vera Cruz. 4 1 7
Potassium Chlorate—
Antwerp. 4 c. £6
Copenhagen, 1 t. 33
Gothenburg, 15 18 483
Hiogo, 36 5 1,127
Hong Kong, 1 30
Pasages. 5 138
Penang, 12 375
Potassium Prussiate—
Campana, 4 c. £15
Genoa, 17 t. 19 212
Leghorn, 10 30
Shanghai, 2 7
Vera Cruz, 1 1 3 q. 74
Pottasium Stannate—
Bombay, 1 t. 3 q. £56
Salammoniac—
Alexandretta, 10 brls. £42
Bombay, 3 t. 9 c. 111
Campana, 10 22
Galatz, 5 8
Gijon. 9 16
Karachi, 1 4 38
Salt—
Accra, 17 t. 10 c.
Alligator Pond, 10
Baltimore, 50
Boston, 150
B. Ayres, 12 5 350 cs.
Calcutta, 1,832 1
C. C. Castle, 22 6
Cape Mount, 15
Cape Town, 24 9
Carleton, 50
Carlbon, 16
Ceara, 9
Conakry, 82 14
E. London, 63 15
Houlton, 16
Johannesburg, 1 5
Lagos, 203
Melbourne, 57 2
Mossel Bay, 20
New York, 31 5
Norton, 16
Nuevitas, 44 13
Para. 812 10
Portland. Me., 100
Pt. Natal, 50
St. John, N.B., 554
St. Mary's, U.S A., 13 10
Salt Pond, 11 3
San Pedro. 7 10
Shediac. 10
Sherbro, 25
Sussex, 16
Sydney, 380
Trinidad, 46 17
Winnebah, 20
Salt Cake—
Delagoa Bay, 10 t. £25
Leghorn, 75 146
Saltpetre—
B. Ayres, 6 c. £8
Ceara, 2 t. 45
M Video, 13 2 q. 14
Para, 2 10 56
Sheep Dip—
Algoa Bay, 500 dms.
Calcutta, 4 cks. 100
M. Video, 256
Soap—
Accra, 60 bxs.
Addah, 100
Algoa Bay, 2,200 10 cs.
1,650 pks.
Amsterdam, 230
Antwerp, 100
Appam, 150
Assinee, 28
Attuabe, 140
Axim. 101 3
Bakana, 250
Bangkok, 200 1
Barbadoes, 2,200 31
Barberton, 70
Batavia, 1,900
Bathurst, 23
Bayin, 78
Beyin, 50
Bombay. 1,187 43
Brisbane, 3
B. Ayres, 2
Calcutta, 15 5 250 bdls.
Campana, 40 dms.
C. C. Castle, 586
Cape Town, 505 1,570
Christiania, 100
Conakry, 40
Constantinople, 20
Copenhagen, 40
Curacao, 170
Delagoa Bay, 260
Fremantle, 2,420 13 tnks.
Gibraltar, 675
Gijon, 50
Gd. Bassa, 2
Grenada 200
Guadeloupe, 626 bdls.
Hamburg, 160 dms
Iquitos, 200
Islandia, 1
Hong Kong, 1,000
Johannesburg, 250
Karachi 87
Kingston, 1,900 5 bdls.
Lagos, 462
Lisbon. 10
Madras, 83
Malta, 13 20
Manaos, 750
Mannheim, 280
Mauritius, 1,510
Melilla, 100 2
Monrovia, 11
Mossel Bay, 550
New York, 44 dms.
Ottawa, 500
Para. 950
Pt. Elizabeth, 100
Piræus, 15 pks.
Pt. Louis, 200
Pt. Natal, 3,250 111
Porto, 200
Pt. Said, 2
Pretoria, 700
Rangoon, 1,212
Rotterdam. 103 485 97 dms.
St. John, N.B., 500
St. Lucia, 120
St. Pierre, 10
St Thomas, 500
Salt Pond. 80
San Fernando, 500
San Juan, 300
Savanilla, 3
Shanghai, 7,058
Sierra Leone, 54
Singapore, 1,621 32
Sourabaya, 500
Teneriffe, 224
Toronto, 3 120
Warri, 958
Winnebah, 350
Soda Ash—
Antwerp, 500 bgs.
Baltimore, 800
Barcelona 20 cks.
Barranquilla, 50 500 cs.
Boston, 200 25 tcs. 56
Calcutta, 400 kgs. 250
Demerara, 8
Genoa, 201 bgs.
Geraldton, 13
Hiogo, 195
Jaffa, 30 brls.
Leghorn, 200
Liban. 100
Lyttelton, 32
Melbourne, 4 dms.
Newfairwater, 600
New York, 1,448 65 tcs. 94 cks.
Philadelphia, 2,264 32 10
Puerto Cabello, 16 brls.
Rio de Janeiro, 30
Samos, 30
Savona, 120
Stockholm, 23
Sydney, 130
Toronto, 200
Turin, 100
Valparaiso, 150
Venice, 100
Vigo 3
Wellington. 77
Windsor Mills, 320
Soda Crystals—
Alexandria, 220 brls.
Boston, 280
Bracebridge, 134 bgs
Cape Town, 67
Dedeagatch, 25 cks.
Halifax 50
Huntsville, 114
Jaffa, 17 pks.
Malta. 110
Portland, Me., 100
Pt. Natal, 15 kgs 50
Rotterdam. 50
St. John, N.B. 134
St. John's, N'fd., 50 cks.
Shanghai, 35
Sydney, 18
Sodium Biarseniate—
Vera Cruz, 4 cks.
Sodium Bicarbonate—
Algoa Bay, 20 kgs.
Antwerp, 32 12 cks.
Barcelona, 125 2
Bilbao, 50
Brindisi, 20
B. Ayres, 20
Bussorah, 20
Cadiz, 20
Calcutta, 225 6
Cape Town, 8 bgs.
Corunna. 6
Delagoa Bay, 10 kgs.
Galatz, 193
Halifax, 200
Hiogo, 500
Kobe, 200
Konigsberg. 100
Kustendjie, 67
Leghorn, 50 4
Libau, 85
Lisbon, 100
Madras, 255
Malta, 40
Marseilles, 145
Melbourne, 20
Napier, 40
Odessa, 500 dms.
Palermo, 30 4
Piræus, 20
Pt. Natal, 40
Rangoon, 300
Rotterdam, 30
Rouen, 260 30 pks. 2 cks.
Santander, 15
Singapore, 10
Sydney, 40
Tampico, 6 brls.
Tarragona, 60
Toronto, 107
Tunis, 50
Valencia, 20
Vancouver, 100
Varna, 90
Venice, 200
Vera Cruz, 70
Victoria, B. C., 120
Wellington, 50
Yokohama, 300
Sodium Bisulphite—
Sydney, 4 cks.
Sodium Carbonate—
New York 84 brls.
Sodium Chlorate
Antwerp, 100 kgs.
Hamburg, 10
New York, 100
Vera Cruz, 10
Sodium silicate—
Santander, 10 brls.
Starch—
Lisbon, 3 cks.
Maranham, 10 bgs.
Smyrna, 24 10 cs.
Santos, 2
Sulphur—
Boston, 100 t. 4 c. £428
Para, 1 10 12
St. John, N.B., 15 4
St. John's, N'fd., 3 13
Sulphuric Acid—
Campana. 7 c. 2 q. £7
Forcados, 4 2 4
Maranham, 2 t. 25
Sydney, 207 glns. 31
Superphosphates—
Adelaide, 30 t. £792
Castellon, 200 518
Cullera, 233 1 c. 616
Honfleur, 665 1,097
La Pallice, 1,163 1,921
Las Palmas, 40 99
Malaga, 60 180
Mangalore, 22 56
Nantes, 24 12 46
Pasages, 30 85
Santander, 10 28
Valencia, 7 5 355
Yarnish—
Antwerp, 14 cks
Bilbao, 2 cs.
Bombay, 11
Cape Town, 1
Demerara, 6 brls.
Lisbon. 2 pks.
Novo Redondo, 12 dms.
Odessa, 2 cs.
Venetian Red—
Christiania, 40 cks.
Genoa, 100 bgs.
Gothenburg, 70
Hamburg, 300
Kansas City, 100 brls.
Leghorn, 10 cks.
Marseilles, 70 kgs. 15 cks.
N. Orleans, 200
New York, 340 bgs
Odessa, 152 cks.
Santander, 34
Stettin. 50 bgs.
Sydney, 100 kgs.
White Lead—
Halifax, 50 kgs.
Kingston Jam., 50
Rio G. do Sul, 23 dms.
Zinc Chloride—
Bombay. 1 t. 5 c. £25
Maranham, 1 1 20
Portland, Me., 12 16 81

MANCHESTER.

Week ending March 15th.

Caustic Soda—
Germany, 2 kgs. 1 ck.
Chemicals (*otherwise unspecified*)
Alexandretta 50 brls.
Alexandria, 29
Basle, 15 kgs. 3 cks.
Rotterdam, 10 kgs.

Coal Products—
Aniline Colours
Germany, 16 kgs. 3 cks. 3 cs.
Aniline Oil
Germany, 1 dm.
Aniline Salt
Belgium, 5 brls.
Germany, 1 pun
Carbolic Acid
Germany, 25 cks.
Naphtha
Treport, 26 brls.
Naphthylamine
Germany, 54 cks.
Pitch
Belgium, 244 t. 18 c.
Tar Oil
Belgium, 10 brls.

Colours—
Larnaca, 2 brls.

Copperas –
Alexandria, 35 brls.
Mersyne, 50

Glue
Belgium. 10 cks.
Germany, 20
Holland, 12

Linseed Oil—
Alexandria 6 brls.

Potassium Bichromate—
Mersyne, 8 cks.

Sodium Naphthionate—
France, 27 bgs.
Germany, 14 cks.
Switzerland, 16

Sodium Silicate—
Sfax, 15 brls.

Turpentine—
Larnaca, 1 dm

Varnish—
Larnaca, 3 cs.

HULL.

Week ending March 11th.

Alkali—
Stavanger, 4 cks.

Ammonium Sulphate—
Dunkirk, 187 bgs.
Ghent, 250
Palermo, 100

Caustic Soda—
Trieste, 17 dms.

Chemicals (*otherwise undescribed*)
Amsterdam, 49 cks.
Antwerp, 10 pks.
Bergen, 4 363 slbs.
Bombay, 934
Christiania, 3 4 cs. 10 pks. 542 slbs.
Christiansund, 10
Copenhagen, 33
Danzig, 12 8 pks.
Gothenburg, 5
Hamburg, 118
Hango 1
Konigsberg, 7
Rotterdam, 84
Reval, 5
Stettin, 5

Coal Products—
Pitch
Antwerp, 22 t. 3 c.
Rouen, 6
Tar
Amsterdam, 6 cks.
Antwerp, 10
Copenhagen, 25
Dunkirk, 21
Hamburg, 20
Reval 3 cs.
Rotterdam, 23

Colours—
Bari, 4 cks.

Cottonseed Oil—
Amsterdam, 25 t. 3 c.
Antwerp, 24 9
Dunkirk, 29 15
Ghent, 10
Gothenburg, 5
Hamburg, 19 2
Rotterdam. 63 10
Rouen, 19 19
Stavanger, 14
Trieste. 5 1

Dyestuffs (*otherwise undescribed*)
Danzig, 4 cks.
Drontheim, 1 cs.
Gothenburg, 2
Hamburg, 1
Stettin, 15

Guano—
Dunkirk, 105 t.

Linseed Oil—
Amsterdam, 5 t. 3 c.
Bombay, 24 2
Christiania, 11 13
Copenhagen, 18
Christiansund, 1 16
Drontheim, 4 9
Hamburg, 23 19
Karachi, 12
Rotterdam, 5 3
Stavanger, 2 12
Venice, 3 13

Naphthylamine—
Reval, 38 bgs.

Paint –
Bombay, 297 cks

Painters' Colours—
Amsterdam, 18 cks. 2 cs.
Antwerp, 14 51 172 dms 14 pks.
Bremen, 3 1 dm.
Bombay, 1,531 134
Christiania, 38 1 pk.
Copenhagen, 24 6 1
Danzig, 15
Drontheim, 5 20 dms.
Dunkirk, 4
Ghent, 1 109
Hamburg, 14
Harlingen, 1 1 200 pks.
Hango, 1
Karachi, 10
Konigsberg, 1
Reval, 1 3
Rotterdam, 72 1 35
Stettin, 1

Soap—
Amsterdam, 315 cs.
Christiania, 1 ck. 100
Hamburg, 1
Stettin. 1

Tallow—
Hango, 35 cks.

Varnish—
Antwerp, 1 ck.
Bombay, 97 dms.
Danzig, 7 cs.
Ghent, 2
Hamburg, 2 2

GLASGOW.

Week ending March 16th.

Alum –
Melbourne, £20

Ammonium Carbonate—
Christiania, £7

Ammonium Sulphate—
Rotterdam, 40 t. 6 c. 2 q.
Venice. 50 12 2

Boracic Acid—
Melbourne, £106
Rotterdam, 38

Borax—
Melbourne, £135
Natal, 10
Rotterdam, 27

Caoutchouc –
Huelva, £143

Castor Oil—
Adelaide, £73
Melbourne, 23 10s.

Chalk—
B. Ayres, 2 t. 18 c. 3 q.

Coal Products—
Aniline
Calcutta. £107 10s.
Benzine
Bordeaux, £187
St. Nazaire, 63
Carbolic Acid
Amsterdam, £200
Rotterdam, 317
Creosote
Lisbon, £191 13s.
Creosote Oil
Bordeaux, £5,778
Christiania. 35
Naphtha
Christiania, £3
Pitch
Bombay, £171 17s.
Christiania, 15
Fiume, 45
Tar
Bombay, £291
Boston, 201
Karachi, 51
Transvaal, 24 17s.

Copperas—
Karachi, 16 t.

Copper Sulphate—
Bordeaux, 85 t. 16 c.

Dextrine—
Lisbon, £35 16s.

Dyestuffs—
Sumac Extracts
Portugal, £54 19s.

Glucose—
Cape Town, 1 t. 4 c.

Iodine—
Rotterdam, £50

Lead Acetate—
Lisbon, £20

Linseed Oil—
Canada, 10 t. 11 c. 2 q.
E. London, 1 10

Litharge—
Christiania, £20
Johannesburg, 21

Logwood Extract—
Bergen, £30
Canada, 128 10s.
Portugal, 22 9

Magnesia –
Adelaide, £21

Magnesium Chloride –
Nantes, £22

Magnesium Sulphate—
Adelaide, £12

Muriatic Acid—
Bombay, £468

Ochre—
Amsterdam, 15s.

Painters' Colours—
Bombay, £351 11s.
Calcutta, 437 18
Cape Town, 62 12
Havana, 277
Huelva, 29 4
Melbourne, 475 15

Paraffin Wax –
Bordeaux, £90
Cape Town, 98
Fiume, 40
Genoa, 772
Leghorn, 308
Pretoria, 157

Potassium Bicarbonate—
Adelaide, £40
Montreal, 130
New York, 65
Rotterdam. 68

Red Lead—
Amsterdam, £1 1s.

Soap—
Algoa Bay, 2 t. 11 c.
Bombay, 3 14

Sulphuric Acid—
Bombay, £500

Superphosphates –
Nantes, 49 t. 4 c.

TYNE.

Week ending March 11th.

Alkali—
Bergen, 2 t. 18 c.
Hamburg, 16 6 2 q.
Rotterdam. 5 1 3

Antimony—
Christiania, 6 c.

Barium Binoxide—
Hamburg. 2 t. 7 c. 1 q.
Rotterdam, 10 15
Venice, 15 8 1

Barium Carbonate—
Hamburg, 10 t.

Blanc Fixe—
Rotterdam, 1 t. 15 c.

Bleaching Powder—
Antwerp 52 t. 1 c. 1 q.
Christiania. 30 2 2
Copenhagen, 10 8 3
Drontheim, 9 16 2
Hamburg. 25 9 3
Rotterdam. 16 11

Caustic Soda—
Antwerp 31 t. 10 c. 2 q.
Christiania. 5 16
Copenhagen, 1 3 1

Coal Products—
Coal Tar
Rouen, 20 t.

Guano—
Dunkirk, 10 t. 1 c.

Litharge—
Copenhagen, 11 c. 1 q.

Magnesia—
Antwerp, 8 c 2 q.
Hamburg, 1 t. 1
Reval, 1
Valencia, 2 1

Manure—
Valencia, 374 t.

Paint—
Antwerp, 8 t. 6 c.
Bergen, 17 4 q.
Christiania, 6 2
Copenhagen, 2 7
Hamburg, 1 1
Rotterdam. 1 10

Painters Colours—
Hamburg, 1 ck.

Red Lead—
Christiania, 5 t. 13 c.
Copenhagen, 6 11 2 q.
Hamburg, 16 11 1
Lisbon, 26 3 3
Nakskov, 1 2
Rotterdam, 3 5 2
Venice, 3 19

Soap—
Hamburg, 6 t.

Soda—
Bergen, 1 t. 12 t. 1 c.
Christiania, 19 17 3
Rotterdam, 20 4 1

Soda Ash—
Hamburg, 5 t. 7 c.

Sodium Sulphate—
Antwerp, 100 t.
Copenhagen, 25

Superphosphates—
Gijon, 510 t. 2 q.

White Lead—
Lisbon, 9 t. 19 c. 3 q.

GOOLE.

Week ending March 8th.

Chemicals (*otherwise unascribed*)
Antwerp, 17 cks.
Boulogne, 4 dms.
Hamburg, 10 5 cs.
Rotterdam, 7

Coal Products (*otherwise undes.*)—
Amsterdam, 48 cks.
Antwerp, 1 cs.
Boulogne, 5
Rotterdam, 34

Coal Products—
Pitch
Antwerp, 1,070 t.

Dyestuffs (*otherwise unascribed*)
Antwerp, 1 ck.
Ghent, 10
Hamburg, 60 bgs.

Manure –
Dunkirk, 500 bgs.
Ghent, 480
Hamburg, 201

Painters' Colours—
Amsterdam, 200 bgs.
Boulogne, 2 cs.
Calais, 3 2 pks.
Rotterdam, 10 cks. 1c tins

GRIMSBY.

Week ending March 11th.

Alkali—
Dieppe, 1 ck.
Port au Prince, 494 dms.
Rotterdam, 5 cs.

Ammonium Sulphate—
Rotterdam, 200 bgs.

Chemicals (*otherwise undescribed*)
Dieppe, 1 ck. 18 cs.

Coal Products (*otherwise undes.*)—
Dieppe, 50 cks 2 cs. 8 pks.
Hamburg, 6
Rotterdam, 25

Colours—
Esbjerg, 10 dms.
Port au Prince, 3 cks. 27 pks.
,, 10 kgs.

Painters' Colours—
Antwerp, 1 kg. 25 cks. 1 cs. 56 pks.
Rotterdam, 21 8

Phosphorus—
Malmo, 10 cs.

PRICES CURRENT.

WEDNESDAY, Mar. 22, 1899.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. *at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.*

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9	&	8/3
,, Glacial .. .. ,,		35/-	
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¼
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	9
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	0	11½
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	0
Arsenic, white powdered .. .. nett per ton	16	15	0
Alum, loose lump .. .. ,,	4	5	0
Alumina Sulphate (pure) .. .. ,,	3	15	0
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¼ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2¾
,, = 24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	19	10	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	10	17	6
,, ,, (grey) Hull .. .. ,,	10	17	6
Aniline Oil (pure) .. .. per lb.	0	0	4½
Aniline Salt ,, ... ,,	0	0	4
Antimony .. .. per ton	38	15	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	4	10	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	5	0
Chromium Acetate (crystal) .. .. per lb.	0	0	5½
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizatine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30% A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	7½
,, 50/90 ,, ... ,,	0	0	8
Carbolic Acid (crude 60°) .. .. ,,	0	1	11½
,, (crystallised 40°) .. .. .. per lb.	0	0	6¾
,, (liquid 95/97%) .. .. .. per gallon	0	1	0
Creosote (ordinary) .. .. ,,	0	0	3½
,, (filtered for Lucigen light) .. .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	3	0	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	3	0
Solvent Naphtha, 90% at 160° .. .. per gallon	0	1	1
Copper .. .. per ton	66	15	0
,, Sulphate .. .. ,,	24	0	0
,, Oxide (copper scales) .. .. ,,	54	0	0
Glycerine (crude) 80% .. .. ,,	24	0	0
,, (distilled S.G. 1250°) .. .. ,,	48	10	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	2	6
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	15	12	6
,, Litharge Flake (ex ship) .. .. ,,	16	0	0
,, Acetate (white ,,) .. .. ,,	26	0	0
,, ,, (brown ,,) .. .. ,,	18	0	0
,, Carbonate (white lead) pure .. .. .. ,,	18	10	0
,, Nitrate .. .. ,,	22	10	0

	£	s.	d.
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	0	0
,, ,, (grey) (ex ship) .. .. ,,	7	17	6
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton	9	10	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	15	10	0
,, Borate .. .. per cwt.	2	0	0
,, Ore, 70% .. .. per ton	3	10	0
Methylated Spirit, 61° O.P .. .. per gallon	0	2	0
Naphtha (Wood), Solvent .. .. ,,	0	3	0
,, ,, Miscible, 60° O.P. .. .. .. ,,	0	3	10
Oils:—			
Cotton-seed .. .. per ton	17	10	0
Linseed .. .. ,,	19	5	0
Stearine .. .. ,,	26	0	0
Phosphorus (Yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	0	0
,, Chlorate .. .. per lb.	0	0	3¼
,, Cyanide, 98 % .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) 90 % .. .. per ton	22	0	0
,, ,, ,, 75/80 % .. .. ,,	17	15	0
,, Potash Hydrate Liquid 50 % .. .. ,,	10	10	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	2	12	6
,, Prussiate Yellow .. .. per lb.	0	0	7¾
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	0
,, Muriate, 80 % ,, ... ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3 7/16
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % .. nett per ton (f.o.r. works)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, (f.o.r. works)	4	5	0
,, ,, (Carb. Soda-ash) 48 % .. ,, ,, (f.o.r. works)	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, (f.o.r. works)	4	0	0
,, ,, (Soda Crystals) .. .. .. ,, ,, (f.o.r. works)	2	10	0
,, Acetate (ex-ship) .. .. ,,	12	10	0
,, Arseniate, 45 % .. .. ,,	13	0	0
,, Chlorate .. .. per lb.	0	0	3¾
,, Borate (Borax) .. .. nett per ton	16	0	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton (10 ton lots)	7	12	6
,, ,, (74 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	0	0
,, ,, (60 % Caustic Soda) .. ,, ,, (10 ton lots)	6	0	0
,, ,, (pure liquor 90° Tw.) .. ,, ,, (10 ton lots)	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate (cwt. kegs) .. .. ,,	6	15	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25 % .. .. ,,	16	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	8	3
,, Nitrite, 98 % .. .. per ton	26	0	0
,, Phosphate .. .. ,,	10	7	6
,, Prussiate .. .. per lb.	0	0	5¾
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	10	0
,, Stannate, 40 % .. .. per cwt.	3	10	0
,, Sulphate (Salt-cake) .. .. per ton	1	9	0
,, ,, (Glauber's Salts .. .. .. ,,	1	10	0
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	4	15	0
Strontium Hydrate, 100 % .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. .. per lb.	0	0	5¾
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton	7	0	0
,, (Roll Brimstone) .. .. ,,	6	0	0
,, Brimstone: Best quality .. .. ,,	4	12	6
Superphosphate of Lime (26 %) .. .. ,,	2	10	0
Tallow .. .. ,,	24	0	0
Tin Crystals .. .. per lb.	0	0	7½
,, English Ingots .. .. per ton	111	0	0
Zinc (Spelter) .. .. ,,	27	10	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	7	10	0
,, Sulphate, Crystal .. .. ,,	7	5	0

THE

CHEMICAL TRADE JOURNAL

AND

OIL, PAINT and COLOUR REVIEW.

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LATE ADVERTISEMENTS.

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MANAGER of Chemical Manure and Sulphuric Acid Works seeks fresh Appointment. Twenty years' experience in laboratory and works.—"M.N.," Norfolk Villa, Stanley-road, Woodford.

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CURRENT TOPICS.

THE MANAGEMENT OF SEWAGE WORKS.

WE have often contended that the treatment of sewage and the management of sewage works came more within the sphere of the chemist than of the engineer, but it is a fact that hitherto has not been fully realised by public bodies or acted upon by those who have had to do with the appointment of sewage works' managers.

As the natural outcome of this failure to appreciate the essential requirements for the proper conduct of a sewage works, we have frequently had to admit that sewage treatment works, which apparently were all that could be desired from an engineering point of view, have not turned out effluents as good as might be expected.

We admit that the laying out of sewage works is a matter for the engineer—purely and simply, but when it comes to the daily management and maintenance the claims upon the engineer dwindle to almost microscopic proportions, whereas the control of the chemist becomes an hourly necessity.

We are, therefore, very pleased to see that the Rivers Committee of the Manchester Corporation has at last recognised this fact in re-arranging the duties and positions of the officers connected with their sewage works at Davyhulme, by making their chemist, Mr. G. J. Fowler, the superintendent of the works. The works' manager will still have his duties and responsibilities as before, but the superintendent will be responsible for the summarising of the works manager's daily reports, and will be able to arrange that the conduct of the works shall harmonise with the best interests of the treatment process which is in progress, be it bacterial or otherwise.

BRITISH EXHIBITORS AND THE FRENCH EXHIBITION.

The statement which we made some weeks back, to the effect that a special Bill was to be laid before the French Parliament for the protection of British exhibitors, has been confirmed, since the Royal Commission for the Paris Exhibition has been officially informed by the Consul-general of France that the Bill will shortly be laid before the French Chamber The Act of 1868 will be re-enacted, with some amendments. It will give the owner of a design the rights conferred by patent from the date of admission to three months after the close of the Exhibition, without prejudice to any patent or registration which he may effect before the expiry of that period. This gives a longer protection than is afforded in similar cases in the United Kingdom by British law. Her Majesty has declared that the provisions of sections 39 and 57 of the Patents, Designs, and Trade Marks Act of 1883 shall apply to the Paris Exhibition of 1900. This relieves exhibitors from giving notice of their intention to exhibit. These provisions should allay any fears which British exhibitors may entertain with regard to exhibiting at the Paris Exhibition of 1900, but still, as we felt bound to

point out in February last, the Bill has yet to be *passed* by the French Chamber, and its exact tenour ascertained when it has emerged from the Bill into an Act and become a legal instrument.

ITALIAN SULPHUR.

We have been waiting to see what action, if any, would be taken by the producers of sulphur in Italy now that the Anglo-Sicilian combination has borne good fruit, and last week we had the pleasure of making the acquaintance of the Central Italian (M.S.T.R.) Sulphur Co. The mysterious letters have nothing to do with secret societies, but are a merciful contraction of the name of the chief property acquired by the Company, namely, the Miniere Solfuree Trezza Romaga. In all, twenty-three properties have been acquired by the Company, which comprise all the principal mines in the Cesena district.

Mr. Pearse, who has inspected the properties for the Company, states that the present producing capacity of the mines is about 2,000 tons per month, and can be increased to 3,600 tons. The cost of producing refined sulphur is estimated to be 71·50 lire per ton at Cesena, and 69·80 lire at Marches. The average selling price from 1860 to 1898 has been between 130 and 135 lire per ton. The capital of the Company is £400,000., divided into 250,000 ordinary shares and 150,000 deferred shares of £1. each.

THE STANDARD OIL TRUST IN CANADA.

It seems late for Canada to begin fighting Mr. J. D. Rockefeller and his Standard Oil Trust. It would have been preferable if steps had been taken long ago to prevent the combination throttling the industry of the Dominion. Still, it is better late than never, and it is at least satisfactory to note that already independent refiners and dealers in Canada have succeeded in dealing the Trust one serious blow.

In order to consolidate its monopoly the Trust made certain arrangements as to transport with the Grand Trunk and the Canadian Pacific Companies, which may be briefly summarised. It was some time early last year that the Standard Oil Company submitted a proposal to the two Canadian railroads in reference to freight rates charged on American oil shipped into Canada, and distributed from points in Canada. The Standard Oil Company prefaced its proposition to the Canadian railways with the claim that it was able by vessel, if it so desired, to handle 200,000 barrels of its Petrolea product and 70,000 barrels of its American product without using rails as a means of transportation. It suggested that if the railways would come to terms the Standard Oil Company would limit its shipments by water to two points—Montreal in the East and Fort William or Port Arthur in the West. It also claimed that the shipments to these two points would absorb about one-third of the total possible shipments by water. In consideration of this restriction of carriage by water it suggested to the railways the following rates on the rail shipments: That the rates from American to Canadian points be increased by 100 per cent. for carriage of oil in tank cars, and that the rates from Canadian points to other Canadian points be increased 50 per cent. on shipments of less than carload lots. The company also demanded a rebate of 33⅓ per cent. on these rates and that no other shipper should have the rebate. This proposal or demand was concurred in by the railways, and an agreement was entered into between the Standard Oil Company and the Grand Trunk and Canadian Pacific Companies and signed on October 1, 1898. The increase of 100 per cent. in the rates, as far as shipment from an American point to a Canadian point is concerned, went into effect immediately, while the 50 per cent advance on less than carload lots from one Canadian point to another went into operation on January 6, 1899, when the Grand Trunk Railway Company published and distributed the schedule to those interested in the trade. The Canadian Pacific Railway did not issue a schedule, but concurred in the advanced rates. These increases in tariff put the Oil Company just where it desired to be; but the effect upon trade has been of a crushing description; for the price of oil fuel has been enhanced to a figure which is not consistent with profit in many of the trades with which the employment of such fuel is a necessity.

In illustration of this a Hamilton correspondent writes:—"I have a letter in my possession from a large manufacturer who employs 400 hands, stating that they have had to close down their works on account of the Standard Oil Trust shutting off its fuel oil without any notice, and that they have more orders than they can turn out. The manager of this concern stated to me personally that he knew of factories that come under his own personal observation that have had to close down for the same cause, thereby throwing out of employment between 4,000 and 5,000 employés. This is a very serious matter indeed, and what seems to make it appear worse is that our two largest railway corporations have deliberately conspired with this monopoly, thereby assisting them to carry on their campaign to the detriment of the financial and commercial interests of this country."

Matters having arrived at such a pitch that the manufacturers were either to stand still and see themselves bled to death, or to take up arms against the monopoly, the latter alternative was adopted, and a meeting of consumers of oil fuel was held in Toronto, at which a large number of firms of the highest standing in Canada were represented. The meeting determined to elaborate a plan of campaign, and meanwhile to lend its help to those independent oil refiners and dealers who were fighting the question of the new tariffs before the railway committee of the Privy Council at Ottawa. Almost simultaneously with the meeting arriving at this conclusion the result of the appeal at Ottawa became known, the question, it may be mentioned, having originally been brought before the committee, on the initiative of the Sun Oil Refining Company of Hamilton, Limited, associated with which were the following companies: The Gall Schnieder Oil Company, Montreal; the Atlantic Oil Refining Company, Montreal; and the American Oil Company. The effect of this action on the part of the companies referred to was that the Canadian Pacific and the Grand Trunk, through their legal representatives, agreed to an absolute and unconditional withdrawal of their local tariffs. This is undoubtedly an important point gained; but it is obvious that a great deal yet remains for the manufacturers who met in Toronto to accomplish. If they are as much in earnest as their speeches represented them to be, there is little doubt that, with perfect unanimity, they ought to be able to relax the tentacles of the octopus to such an extent, at any rate, as will permit them to go on living. Care should also be taken to see that no secret arrangement as to a rebate is entered into between the railway companies and the Oil Trust which would destroy the legitimate effect of the withdrawal of the new tariffs.—*Financial News.*

THE RESIN MARKET.

Up to the present new-crop resin has practically not been offered from America, though in previous years the principal business has all been done before this time. There is a disposition on the part of shippers to wait, in the hope of being able to form a better idea as to what the position is likely to be. There are several reasons, it is argued, for thinking that the low, unremunerative prices of previous years will not be repeated this year. There is said to be an absolute scarcity of pale resins in America at present, instead of a large surplus as in the last three years. The American and English soapmakers are comparatively bare of stocks, and some even of last year's contracts are not yet completed. If low prices are eventually accepted, it will only be when a heavy crop is actually apparent. Low grades are much firmer, and there has been a good demand at the advance. Imports at the Continental ports are many thousands of barrels behind the usual volume. Hamburg, for instance, having imported 112,000 barrels low grade less than at the corresponding date last year. Common resin is quoted higher, shippers declining to go on at the recent low prices at which cargoes were sold forward. There has rarely been so little resin afloat to the United Kingdom as at present. In the London market pale resin remains firm at the advance, and medium and common are rather higher. The demand is good, and stocks are running low, with no supplies afloat to that port. On the other hand, low grades have accumulated at Liverpool to such an extent that there seems no immediate prospect of any advance of prices there. Pales, however, are rather firmer under the influence of American advices. At Hull all grades are firmer, but there is not much demand.

Peanut Butter.—It is reported in an American journal that a new factory has just been put in operation in the city of Kokomo, Indiana, for the manufacture of butter from peanuts. At the present price of the nuts the butter can be sold at 15 cents per pound. The process of manufacture is no secret. The nuts, after the hulls are removed, are carefully handpicked and faulty kernels removed. They are then roasted in a large rotary oven. Again they are gone over by hand for the removal of scorched grains. The nuts are then put through a mill and ground as fine as the finest flour, the natural oil in the grains giving it the appearance and consistency of putty as it leaves the mill, except that it is more of an orange colour. By the addition of water the butter is complete, no other ingredient—not even salt—being used. It never grows rancid, and keeps in any climate. If this butter is all that it is said to be, it would seem that sooner or later the ordinary dairies will have to cease business, but much must be allowed for American enthusiasm in heralding this new butter substitute.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Sewage, etc., Filters. W. Noton. 5,415. March 13.
Purification and Softening of Water. A. J. Bell and P. A. G. Bell. 5,423. March 13.
Preparing Chemically Pure Linseed Oil. L. Schubbert. 5,507. March 14.
An Improved Process of Tanning. F. W. Wartenberger. 5,529. March 14.
Artificial Stone. E. Coulon. 5,603. March 15.
Manufacture of Sewage Manure. J. E. Bousfield. 5,662. March 15.
Producing Aluminium. C. Haubtmann. 5,675. March 15.
Process of Manufacturing Cyanides. A. Dziuk. 5,758. March 16.
Apparatus for Consuming Smoke. T. Nurse. 5,764. March 16.
Treating Refractory Sulphides. F. Ellershausen. 5,767. March 16.
Improvements in Electrolysis and Electrolytical Apparatus. U. L. P. Le Verrier. 5,781. March 16.
Improvements in the Manufacture of Soap. W. H. Power. 5,834. March 17.
Improved Process for Tanning. R. Combret. 5,875. March 17.
Treating Wood to Obtain therefrom Charcoal and other Products. W. H. Philipson. 5,923. March 18.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Process of and Apparatus for the Manufacture of Chlorine and Bleaching Powder. P. Naef, 15, Third Avenue, New Brighton, New York, U.S.A. Eng. Pat. 5,293. March 3, 1898. (Under International Convention August 7, 1897.)

Magnesium oxide is mixed by mechanical means with ammonium chloride, obtained in the ammonia soda process, and passed continuously through an inclined revolving furnace, heated by flues disposed longitudinally in the periphery. Carbon dioxide or nitrogen is drawn through the furnace in the opposite direction to the mixture of magnesia and ammonium chloride, which when discharged from the end of the furnace passes into a second one of larger proportions, and heated to a higher temperature. In this the magnesium chloride formed in the first furnace is decomposed with hot air, liberating chlorine and re-forming magnesium oxide. The chlorine is passed through two scrubbers, in the first of which any hydrochloric acid is removed by water, while in the second the chlorine is dried by means of strong sulphuric acid. It then passes into a revolving absorber and is converted into bleaching powder. There are four figures illustrating the plant. The patentee does not claim for the chemical reactions as such, but for the improved means for carrying out the reactions.

Improvements in Apparatus for the Dry Distillation of Wood, Wood Refuse, Coal Peat, and the like, and for the Treatment of other Substances. E. M. J. Larsen, 12, Norrwoldgade, Copenhagen. Eng. Pat. 27,309. December 27, 1898.

This patent is essentially of a mechanical nature, there being fourteen figures illustrative of the plant employed. Briefly, it may be stated that two revolving retorts are used; the furnace gases employed as a source of heat first carbonize the contents of one retort and passed forward to dry the contents of the other retort. By valves the current of gases can then be reversed, and the dried contents of the second retort carbonized, and so on.

Improvements in the Manufacture of Phosphorus and in Apparatus therefor. L. L. Billandot, 16, Avenue Victoria, Paris. Eng. Pat. 7,002. March 22, 1898.

The materials to be treated are decomposed in an electric crucible by the aid of the electric arc. The phosphorus vapours and gaseous oxides of carbon are passed to a battery of vertical condensing pipes, in which the phosphorus condenses, but remains liquid, the pipes being kept at a temperature of 122° F. The syrupy phosphorus flows by gravity to a second distilling pot, its flow being assisted by jets, which direct compressed oxide of carbon gases against the interior sides of the condensing pipes. The phosphorus is re-distilled and collected under hot water in the usual way. The gases escaping from the condensing battery are passed up a tower containing coke, or other material, saturated with a solution of a salt of copper, which retains the last traces of phosphorus vapour as phosphide of copper. The residual gases (which are mainly composed of carbon mon-oxide) are burnt under the re-distilling pot, a portion being compressed to feed the blowing jets in the condensing pipes. There are four figures.

Improvements Relating to the Separation of Cobalt from Nickel and other Metals. A. Coehn, 45, Obere Karspüle, and E. Salomon, 23[II], Walzenmühlenweg, both in Göttingen. Eng. Pat. 9,153. April 20, 1898.

Advantage is taken of the fact that cobalt salts, when electrolysed, always re-act to form superoxides at the anode, whereas nickel salts do not. The salts are therefore subjected to electrolysis, and to prevent cathodic deposits of both metals, some more easily deposited metal, such as copper, is added to the electrolyte. The process can be conducted at a temperature of about 60° C., with a current of 0·1 amperes per square decimetre at 1·5 to 2 volts.

Process for the Production of Cement from Limestone and Blast Furnace Slag. C. von Forell, Giessen, Germany. Eng. Pat. 27,339. December 27, 1898.

Powdered slag is mixed with limestone in pieces and heated in a a furnace arranged for continuous working, and in which three zones of temperature are maintained. In the first (nearest the mouth of the furnace) the temperature is below 100° C., and the combined water, etc., driven off in the second zone is condensed, and absorbs the carbon dioxide given off. This carbon dioxide desulphurises the slag. The mixture passes to the second zone and is dehydrated, after which it enters the third zone, which is hot enough to decompose the limestone and afford the carbon dioxide necessary for the desulphuration. The frit is then removed, powdered, and the final burning of the cement completed in a separate operation.

Preparation of Hydrocyanic Acid and Hydrocyanic Ethers. H. R. Vidal, 95, Boulevard Beaumarchais, Paris. Eng. Pat. 4,227. February 19, 1898.

Formic, acetic, and other fatty acids are decomposed with phospham (PN_2H), yielding phosphoric acid and hydrocyanic acid, according to the reaction—$PN_2H + 2CH_2O_2 = H_3PO_4 + 2HCN$. Thus about 60 kilos. of phospham are heated with 63 kilos. of acetic acid to 150° to 200° C. in an oil bath. The phosphoric acid remains as a sticky mass, and the hydrocyanic acid is given off as a gas, which, after suitable purification, is absorbed in a solution of caustic alkali.

Society of Chemical Industry.—*London Section.*—Since the first Monday in April falls on Easter Monday, the next meeting will be held on Monday, April 10, 1899, at the Chemical Society's Rooms, Burlington House, Piccadilly, at 8 o'clock p.m. The following Paper will be read and discussed :—"The Industrial Technical Treatment of Sherry and the British Colonial Wines," by Dr. J. T. W. Thudichum.

Pollution of the Mersey.—At the Daresbury Petty Sessions on Tuesday Messrs. Joseph Crosfield and Sons, Limited, soap manufacturers, Warrington, were fined £1. and costs in six cases for permitting lime sludge from their works to enter the Mersey. It was stated on behalf of Admiral Sir G. Nares, acting conservator of the Mersey, that proceedings had become necessary in view of the discharge of solid matter into the river. For the defence is was stated that Messrs. Crosfield had gone to great expense and trouble to avoid river pollution, and in point of fact what the prosecution alleged was turned into the river was sold to customers for the purposes of manure.

Bowman, Thompson, and Co., Limited.—The annual meeting of this Company was held at the Victoria Hotel, Manchester, on Tuesday. There was a large attendance of shareholders. The report and statement of accounts were presented, and a dividend of 7 per cent. on the preference shares and 7½ per cent. on the ordinary shares was declared, the sum of £9,791. being carried forward to the current year. The chairman (Dr. Bowman) pointed out that although the chemical trade had not been as satisfactory as could be desired during the past year in consequence of foreign tariffs and the unsettled state of the markets generally owing to the Spanish-American war and the Fashoda difficulty, the Company had been able to fully maintain its profits. The retiring directors, Messrs. Eastwood and Ferguson, were re-elected.

The Government Petroleum Bill.—It is understood that the Petroleum Bill to be introduced by Mr. Collings will provide for three classifications of petroleum instead of two which at present exist. The regulations as to the sale and storage which now apply to petroleum spirit with a flash point under 73° are to be maintained, but less stringent regulations of a similar character will probably be applied to petroleum oil between the flash points of 73° and 85°. Petroleum oil with a flash point of 85° and over will be in the position as far as regulations are concerned now occupied by petroleum oil with a flash point of 73° and over. [We intimated this fact a fortnight ago, and so did the London correspondent of the *Glasgow Herald*, but the *Times* has now made the above statement in its Political Notes, so of course it must be Gospel.—Ed. *C.T.J.*].

LEAD POISONING IN THE POTTERIES.

THE joint report of Professor Thorpe and Professor Oliver to the Home Secretary on the subject of the employment of compounds of lead in the manufacture of pottery and their influence upon the health of the workpeople was issued as a Blue-book this week. The inquiry instituted by the Home Office in 1893 clearly established the fact that lead-poisoning prevailed extensively, and the object of the inquiry now concluded, which was entered upon last May, was to ascertain how far the danger may be diminished or removed by substituting for the "white lead" ordinarily used some less soluble compound of lead—*e g.*, a silicate, or else a "leadless" glaze; how far any substitutes found to be harmless or less dangerous than the basic carbonate of lead lend themselves to the varied practical requirements of the manufacturers; and, further, to obtain suggestions as to the means which might be adopted to counteract the evil effects of lead compounds actually in use. The verification of the absence of lead from the so-called "leadless glazes" was also proposed as a subject of inquiry Besides visiting factories of earthenware and china at Stoke, Hanley, Burslem, and other places in the Pottery District, Professors Thorpe and Oliver have visited, either singly or together, the leading manufactories on the Continent, including those at Delft, La Louvière, Maastricht, Copenhagen, Stockholm, Dresden, and the Royal Prussian Porcelain works at Charlottenburg. Special reports on these visits by Professor Thorpe are appended to the joint report, and the Blue-book also contains a report by Professor Thorpe of experiments on substitutes for raw lead conducted in the Government Laboratory, and a statement for purposes of comparison, of the special rules for the manufacture of pottery in force in England and the regulations observed in foreign countries

The report, which is dated Februrry 21, states at the outset that since the inquiry of 1893 very little of an effective character has been done, or even attempted, to remedy the evil of lead poisoning, and from the figures given it appears that of the total male workers, in the year 1898, 4·9 per cent. became "leaded," while of the female workers the proportion is as high as 12·4 per cent.

LEADLESS GLAZES.

With regard to obviating the use of lead in glazes, inquiry at first showed that only in a few cases were the results of experiments satisfactory, although in the case of white and cream-coloured ware (as distinct from the use of glazes in conjunction with colours) there ought to be little difficulty in the application of a leadless glaze. In the last six months, however, many successful attempts to substitute a leadless glaze have been made by the manufacturers, and the authors of the report say they "have no doubt whatever that leadless glazes, of sufficient brilliancy, covering power, and durability, and adapted to all kinds of table, domestic, and sanitary ware, are now within the reach of the manufacturer," and that this fact is now becoming admitted in the trade. If, however, the use of lead compounds in glazes is still to be permitted, the report states that much may be done to minimise their evil effects, and that no practical difficulties would result to the trade from the general substitution of "fritted" for "raw" lead. The substitution of a "simple" silicate, where it has been effected, has been attended with advantage so far as plumbism is concerned, though cases of poisoning from it are not unknown. With regard to this proposed change the report says:—

There is, however, no necessity that the "fritted lead" should be a simple silicate. Experiments made in the Government laboratory upon products obtained from various manufacturers, show that a properly compounded double silicate may be made which fulfills all the requirements of the potter and is at the same time practically insoluble in acids.

A compound of the following proximate compositions, 4 PbO, 6 CaO, 2 $(NaK)_2O$, 3 Al_2O_3, 2 B_2O_3, 37 SiO_2, corresponding to the percentage composition:—Lead monoxide, 22·0; alumina, 7·5; lime, 8·3; alkalis, 3·9; boracic acid, 3·5; silica, 54·8; total, 100·0. is but slightly attacked even by strong hydrochloric acid, and is found to be a suitable constituent of a glaze. Such a compound may be made by "fritting" an intimate mixture of litharge, flint, felspar, tincal and chalk; or an intimate mixture of litharge, flint-glass, borax, china-clay, and ground flint; or, as is done on the Continent, a portion of the flint may be replaced by white sand, the colour, if necessary, being "corrected" by cobalt.

With regard to the workpeople the report, besides advocating

THE EXCLUSION OF WOMEN

from certain parts of the work—except where leadless glazes are used—suggests the adoption of expedients to avoid the absorption of lead by the skin in the process of dipping. In foreign factories either the dippers are provided with india-rubber gloves up to the elbow or else the articles to be dipped are held by tongs, while in England the dippers' hands and arms are immersed in the glazing material. India-rubber gloves have been tried, and though they have not found favour in the Pottery District, a return to them is advised by Professors Thorpe and Oliver; and from this passage and from the subjoined quotation from their report it seems clear that, as in the case of the use of phosphorus in matches, the remedy for much of the existing evil lies in the hands of the workers themselves, if they would only avail themselves of it.

It must be clearly understood that, so long as lead compounds are employed in pottery manufacture, neither the special rules of the Home Office nor the precautionary appliances of the manufacturers will fully achieve their object if the workpeople themselves will not exercise a reasonable amount of care and common sense in obeying these rules and in using these appliances,

THE CARELESSNESS OF THE WORKPEOPLE.

If the workers will persist in eating their food with dirty fingers, or in places where lead is used; if they will neglect cleanliness of person and clothing, or allow the colours to drop about; or hold their pencils in the mouth; or rub their eyes with unwashed hands, it becomes impossible to protect them from mischief. If lead were more sharp and sudden in its attack as a poison we should probably hear much less of its evil consequences. It is, however, slow and insidious in its action, and persons may be "leaded" to a grave extent for months or even years until some functional disturbance arises which seems to let loose the latent poison. It cannot be too strongly impressed upon the worker in lead that no amount of familiarity with its use ought to breed contempt for its evil power. Further, the report expresses strong dissent from the doubts which have been expressed in some quarters as to the greater susceptibility of women and young persons to the evil effects of the metal; and points out that in certain potteries and lead works in Belgium and in Paris women are not allowed in any circumstances to work in the factories, owing to the recognised destructive effect of lead-poisoning on the power of child-bearing. While not recommending the complete abolition of even married female labour in the potteries, Professors Thorpe and Oliver make definite proposals (as the subjoined extract shows) as to the restriction of female labour, a subject which they acknowledge to have been one of the most difficult problems of the inquiry. The report concludes as follows:—

THE CONCLUSIONS

at which we arrive from the inquiries we have instituted at home and abroad, and from the observations and experiments we have made, are:

That by far the greater amount of earthenware of the class already specified can be glazed without the use of lead in any form. It has been demonstrated, without the slightest doubt, that the ware so made is in no respects inferior to that coated with lead-glaze. There seems no reason, therefore, why in the manufacture of this class of goods the operatives should still continue to be exposed to the evils which the use of lead-glaze entails.

There are, however, certain branches of the pottery industry in which it would be more difficult to dispense with the use of lead compounds. But there is no reason why, in these cases, the lead so employed should not be in the form of a fritted double silicate. Such a compound, if properly made, is but slightly attacked by even strong hydrochloric, acetic, or lactic acid. There can be little doubt that, if lead must be used, the employment of such a compound silicate—if its use could be ensured—would greatly diminish the evil of lead-poisoning.

The use of raw lead as an ingredient of glazing material, or as an ingredient of colours which have to be subsequently fired, should be absolutely prohibited.

As it would be very difficult to ensure that an innocuous lead glaze shall be employed, we are of opinion that young persons and women should be excluded from employment as dippers, dippers' assistants, ware-cleaners after dippers, and glost-placers in factories where lead-glaze is used, and that the adult male dippers, dippers' assistants, ware-cleaners, and glost-placers should be subjected to systematic medical inspection.

In the 1893 report the medical members of the committee expressed the opinion that "many old factories are wholly, or in part, unfit in a sanitary point of view for occupation," and they suggested that "there should be some authority to close them, or whatever part of them is condemned, on the same principle as dwellings are declared uninhabitable." We share this opinion, and we concur in the suggestion. Certain of the factories we have inspected are in the last stages of dilapidation, and it appears to us to be well-nigh impossible to introduce into them such re-arrangements or additions as are required by the amended special rules.

The Home Secretary has sent the following circular to all manufacturers of earthenware and pottery, together with a copy of the report by Professor Thorpe and Professor Oliver:—

Home Office, Whitehall, March, 1899.

I am directed by the Secretary of State to forward to you a copy of the report which he has received from Dr. Thorpe and Dr. Oliver upon the use of lead compounds in the manufacture of earthenware and china.

As the outcome of an extended inquiry, they have arrived at certain conclusions of great practical importance :—

First, as regards "raw lead" or carbonate of lead, that this dangerous ingredient is not indispensable either in glazes or in colours which have to be subsequently fired.

Secondly, that certain kinds of "fritted" lead afford a substitute for the carbonate equally effective for practical purposes and attended with far less danger to persons handling it. By the process of "fritting" some or all of the carbonate of lead is converted into a silicate. Of the many varieties of silicate of lead, however, some are found to be almost as injurious as raw lead itself, but where the lead is present as a double silicate it is nearly insoluble, even in acids, and comparatively harmless.

Thirdly, that up to the present time lead—raw or fritted—has been often used in proportion far in excess of any real requirement of manufacture.

Fourthly, that for most kinds of ware, suitable leadless glazes, answering all practical requirements, are now available.

In the light of the present report it appears clear that still further safeguards of a most important kind are within reach, and that it will be necessary to add to the rules provisions to restrict and control the use of lead.

On the other hand, for processes in which the Secretary of State can be assured that neither lead nor any other dangerous substance will be employed, it may be possible to relax some of the present requirements directed specifically against lead-poisoning ; and where lead is only used in an insoluble form (as in the double silicate recommended) and in sparing amount, material disturbance of the existing conditions may not be necessary.

The Secretary of State thinks it right to place you at the earliest possible moment in possession of the report. He will be glad to be informed what steps you have taken or propose to take, particularly as to dispensing with raw lead in your factory and substituting leadless materials, or, at all events, restricting the use of lead to limited proportions of the insoluble double silicate.

He will also be prepared to consider any observations you may desire to make, in view of the further amendment of the special rules.

RIVER POLLUTION IN YORKSHIRE.

THREAT TO CLOSE MILLS.

A SERIES of cases of considerable importance to manufacturers came before the West Riding magistrates at Saddleworth last week. Three firms of woollen manufacturers, viz. Jonathan Chambley, Sons, and Co. of Stone Bottom Mills, Dobcross ; Joseph Buckley and Co , Limited, Linfitts Mill, Delph ; and A. W. Lawton and Sons, Court Mills, Diggle, were summoned under the Rivers Pollution Act for causing polluted water to flow into streams adjoining their respective mill premises. The prosecution was conducted on behalf of the West Riding Rivers Board by Mr. Trevor Edwards, the West Riding solicitor.

The first case taken was that against Messrs. Chambley, who were defended by Mr. Rowbottom, solicitor, of Oldham.—Mr. Edwards said this was the first case of the kind in that court. These proceedings really began in 1895. The defendants at the outset took up the position that it was the duty of the Rural Sanitary Authority to provide the sewers to enable them to drain their trade effluents into them. The Rivers Board approached the Rural District Council, who promptly replied, in 1896, that they did not intend to take trade effluents in the sewers. He claimed that the Rivers Board had done all they possibly could to avoid these proceedings. When they were pressed, however, by the Mersey and Irwell Committee to put that part of the river Tame, which is in Yorkshire, into better condition, they felt they must bring this long delayed matter to a head, and in May, 1898, began to follow the course prescribed by the Act. In August last an assurance was given by the defendants that they would test the rightfulness of their claim that the District Council should take this effluent into their sewers. This had not been done ; neither had a purified effluent been turned into the stream. The Rivers Board, who were charged with a public duty, could not indefinitely stand by and allow nothing to be done.

Mr. Broadley, chief clerk to the Rivers Board, gave formal evidence as to the course of proceedings.

Dr. Maclean Wilson, chief inspector of the Rivers Board, said the mill was situated on the right bank of the Diggle Brook, near its junction with the river Tame, which was a tributary of the Mersey. The chief polluting trades were wool scouring, chiefly piece scouring, and a little dyeing. The effluent from this manufactory was of a very polluting nature. There were six mills above the defendants' on the same stream from which trade refuse was discharged. Three of those had some purification works, one of the others was shortly to be vacated, they were informed, and against another proceedings were to be taken that day.

Cross-examined : By chemical precipitation and filtration a very innocuous effluent could be produced. The cost was comparatively small.

By the Bench : With a plant costing £200. the effluent would not be drinking water, but it would be vastly improved. He could not promise to recommend the Rivers Board to accept the effluent. He would do so if the result were as satisfactory as in other cases.

By Mr. Rowbottom : The maximum cost of treating the sewage he should place at £40. a year. There should also be some return from the grease recovered, which could be accomplished by a combination of manufacturers.

By Mr. Edwards : There were 33 mills in the watershed of the Tame discharging liquid refuse, and of these 21 had constructed purification works. In two other cases work was in progress, and against the remainder proceedings were being taken, or would probably be taken, by the Board if the works were not carried out. In fairness to the majority who had gone to this expenditure, he thought that the minority should be brought into line.

Herbert Mitchell Kershaw, district inspector under the Rivers Board, deposed to the taking of samples.

Mr. Rowbottom said he was bound to admit there was pollution.

Mr. Edwards asked that the Court should make the order, subject, if the Bench though fit, to a reasonable suspension until the works were carried out.

Mr. Rowbottom applied for an adjournment of the case. The proceedings against the District Council referred to by Mr. Edwards were entered in the County Court, but his clients, believing that this was a question general to manufacturers, were not disposed to fight it alone, and withdrew. The District Council, however, had applied for the action to be removed into the High Court, and he understood that he would be served with notice of these proceedings. If he was obliged to go on with that case he argued that these proceedings should be allowed to stand over pending its decision. He was informed that in the Colne Valley, if a suitable case could be found, it was intended to bring a case in combination in order to compel the local authority to make sewers where they did not exist to provide for manufacturers' effluents.

The Chairman, after the magistrates had considered the case in private, announced that they had decided to give their decision in six weeks from that day.

In the case against Messrs. Buckley, Mr. Fripp, solicitor, of Oldham, appeared for the defendants, and Mr. F. A. Reed (Messrs. Learoyd and Co) watched the case on behalf of the owner of the mill.

Mr. Edwards said the negotiations were commenced in July, 1895, but there had not in this case been any attempt to throw the responsibility on the public authority until rather late on in the negotiations.

Mr. Fripp contended that there was no evidence of any offence on June 9th, September 7th, and November 14th. The defendants were, he said, only tenants from year to year, and were so harassed with the proceedings and the liability they incurred that they had given notice to quit, and if an order were made in this case they would close the mill next week.

The Bench intimated that the questions to settle in this case were even more difficult than in the last, and they would give their decision in six weeks.

Messrs. Lawton, who were the defendants in the third case, were defended by Mr. Reed, who, after evidence had been given, said that the industry of Saddleworth was almost entirely textile. Many of the mills in the district were old. They had tenants because those tenants had been in them for a considerable time, but once let those mills be vacated they would probably never be let again. And what would be the result of that? Either they would have to enlarge their workhouse, or the inhabitants would drift out of the district away from the baneful influence and jurisdiction of the Rivers Board. He urged the Bench, therefore, either to refuse the application or to postpone it for such a length of time as would enable them to see what was the outcome of the Bill before Parliament.

The Bench reserved their decision in this case also for six weeks.

Seasoning Wood.—The rapid seasoning of wood by means of the Nodon-Bretonneau electrical process is to be worked on commercial lines in this country. The system is to immerse the timber, all but an inch or two, in a large tank in a solution containing 10 per cent. of borax, 5 per cent. of resin, and 0·75 per cent. of carbonate of soda. The timber rests on a lead plate connected with the positive pole of a dynamo, and a similar plate rests on the top of the wood, and is connected with the negative pole of the dynamo. The dynamo being started, the current flows through the wood, when the sap appears to follow its flow, and rises to the surfaces of the bath, while the aseptic borax and resin solution takes its place in the pores of the wood. Five to eight hours are required for this part of the process, after which the wood is dried either by artificial or natural means. It is said that a fortnight's exposure of the prepared wood, in summer weather, renders it as well seasoned as five years' exposure in the ordinary way.

Official Memoranda.

(From the Board of Trade Journal.)

GYPSUM AND MINERALS IN HAITI.

The Government of Haiti has, by a contract, granted to Miguel Boom, the exploitation, during twenty years, of a mine of gypsum or plaster which he discovered in the north-western part of the island. The Government reserved the right to levy a duty of 15 per cent. on the gross products of the mine, and the right to make special treaties for other minerals that may be discovered within the boundaries of the concession. The extent of land granted to Mr. Boom is considerable, and the result of recent scientific researches, added to *data* acquired since the time of the French occupation, leaves little doubt as to the existence of other important minerals in the vicinity of the gypsum quarry.

Besides the right to dispose of these lands in order that they may be exploited, the Government grants the privilege, in this concession, of exemption from all Customs duties.

The plaster beds are situated in the arrondissement of Gonaives, and extend from the point La Pierre to Anse Rouge. The centre of the industry will be at Corydon, a little village situated on the sea shore, a few miles from the large port of Gonaives. The concessionaire, Mr. Boom, died within a short time after the concession was granted to him by the Government; previous to his death he was endeavouring to obtain consent from Congress to have the products of the mine shipped direct from Corydon, instead of having to pass through Gonaives. There is no doubt that his successor will soon secure this privilege. The quarries are situated a few kilometres from the sea shore, and are connected with the landing by a smooth, straight road, with no streams to cross.

The usefulness of gypsum, sulphate of lime, or rock plaster, by whichever name it may be called, is well known. The best kind is imported into the United States from Nova Scotia. During the winter months ice prevents this trade, and then all the supply could be obtained from Corydon.

One of the kinds of gypsum at Corydon is colourless, and tests made by the United States experts demonstrate that this is superior in quality to the gypsum of Nova Scotia. There are other varieties which closely resemble the Nova Scotia gypsum.

A short time previous to his death Mr. Boom discovered, within the radius of the concession, deposits of iron and copper ore An analysis of samples of these ores showed that the former contained 70 per cent. pure iron and the latter 34·60 per cent. pure copper. In further investigations, he discovered in the mountainous region of Terre Nueve deposits of basalt, coal, and saltpetre, and was on the point of obtaining new concessions when death overtook him.

THE CANADIAN WOOD-FLOUR INDUSTRY.

In view of the inquiries from a number of parties in the Dominion who are inclined to go into the wood-flour trade, the High Commissioner has caused further investigation to be made into the question of the supply and demand, which he has embodied in an interesting letter to the Dominion Minister of Trade and Commerce.

It appears that wood-flour, or "wood meal," is used to some extent as an absorbent for nitro-glycerine in the manufacture of various explosives, and a finer grade is also required for the manufacture of a certain kind of linoleum, known as "inlaid." The consumption of wood meal in the explosive business is estimated to amount to about 700 tons per annum. The following specification for the product is in accordance with the requirements of one of the largest European factories:—

"The wood meal must be made from white wood free from resin. Chemicals, or any other purifying agents for bleaching purposes must not be used in its manufacture. The wood meal must be free from impurities, special care being taken that no nails or other scraps of metal are present in it. The moisture in the wood meal must not exceed 5 per cent. The wood meal must be ground to such a degree that it will pass through a sieve of 50 meshes to the lineal inch, but not more than one-third through one of 100 meshes. The wood meal must not be exposed to acid fumes, nor be over-heated in drying, so as to enable it to pass through the British Government heat test for the detection of slight traces of vinegar or other acid or objectionable volatile matter. The price paid in Scotland is £4. 3s. 10d. per ton, delivered at factory. The price in Germany is 6·50 marks per 100 kilos. The factories seem all to have invariably obtained their supplies locally."

Wood-flour for explosive purposes is only made from soft woods, and the price usually paid here is about £4. 10s. per ton of 2,240 pounds (London or Liverpool). Stout canvas bags containing about 2 cwt. each are used for packing. Great stress is laid upon the necessity for the wood-flour intended for the explosives trade being quite free from grit, and in a dry, finely-divided condition. It should also be very low in resins, and at the same time free from acid.

The demand for this product in the linoleum trade is variously estimated at from 1,200 tons per annum in the United Kingdom to 50 or 60 tons per week. The demand is quite likely to be an increasing one. As stated previously, wood-flour is only utilised for one particular kind of linoleum. It must be finely ground, white in colour, and light in weight. The price obtainable largely depends upon the quality, for while one well-known firm places it at £3 10s. per ton, delivered, others say that orders have been placed at £3.

CUSTOMS TARIFF OF CUBA.

The following is an abstract of the duties levied on goods imported into Cuba:—

Dyeing extracts of logwood, etc., G.W. (gross weight)	100 kilos.	$5 00
Coal-tar colours, G.W.	per kilo.	·20
Sulphur, G.W.	100 kilos.	·15
Bromine, boron, iodine, and phosphorus	kilo.	·18
Hydrochloric, boric, nitric, and sulphuric, also aqua regia, G.W.	100 kilos.	·30
Liquid carbonic acid, N.W. (net weight)	,,	5·00
Other, G.W.	,,	5 00
Oxalic, citric, tartaric, and carbolic acids, G.W.	,,	1·00
Oleic, stearic, and palmitric, G.W.	,,	1·40
Acetic acid, G.W.	,,	6·00
Other acids, G.W.	,,	5·00
Oxides and oxyhydrates: Of ammonia, potash, and other caustic and barilla alkalies, G.W.	100 kilos	·25
Chloride of sodium (common salt), G.W.	,,	·50
Chloride of potassium; sulphates of soda, iron, or magnesia; carbonate of magnesia; alum, G.W.	100 kilos.	·45
Sulphate of ammonia, phosphates and superphosphates of lime; nitrate of potash and soda, G.W.	100 kilos.	·03
Other salts of ammonia, salts of copper, chloride of lime, sulphate of potash, hyposulphite of soda and borax, G.W.	100 kilos.	·75
Chlorates of soda and potash, G.W.	,,	1·80
Acetates and oxalates, G.W.	,,	2·50
Citrates and tartrates	,,	3·00
Chlorides of gold and silver, N.W.	per kilo.	6 75
Vegetable Oils.		
Solid (cocoanut, palm, etc.), G.W.	100 kilos.	2·50
Liquid, except olive oil, G.W.	,,	3·00
Cod-liver oil and other medicinal oils, not refined, G.W.	,,	1·47
Glycerine, olein, stearine, and spermaceti, crude, G.W.	,,	1·40
Other crude oils and fats, G.W.	100 kilos.	·50
Mineral, vegetable, or animal wax, unwrought, and paraffin in lumps, G.W.	100 kilos.	2·50
Articles of stearin and paraffin, wax of all kinds, wrought	100 kilos.	2·40
Common soap, G.W.	,,	1·50
Artificial or chemical fertilisers, G.W.	,,	·05
Starch and feculæ for industrial uses; dextrin and glucose, G.W.	100 kilos.	1·40
Glues, albumens, and gelatin, G.W.	,,	3·90

MANGANESE ORE IMPORTS.—In our last issue we gave an entry of 783 tons manganese ore to R. & D. Jones. At the request of the actual receivers we quote the following from the list of amendments in the Liverpool Bill of Entry:—"Anne Jenssine, of Bahia, 6 March. The cargo of this vessel should have been reported for Geo. G. Blackwell, Sons & Co., Ltd."

SPAIN'S COAL INDUSTRY.—An advance report on the mining industry of Spain for 1898 has been published, and from it some interesting figures are obtainable. The production of coal is 447,000 met. tons greater than in 1897, while the imports of the mineral show a corresponding decline of 419,000 metric tons. The consumption in Spain has increased by 58,175 tons. No less than 60 per cent. of the country's output is from the province of Asturias. This is followed by Cordoba, Ciudad Reel, Leon, &c. The several quantities produced by these provinces are 1,542,974, 320,152, 203,000, and 144.700 tons respectively. The production of anthracite in 1898 was 74,000 tons. Leon contributed 40,000 tons of this quantity. As for the importing towns, Bilbao and Barcelona are the principal, the former importing during 1898 382,000 tons of coal and coke, while the latter took 375,000 tons of coal. Valencia, Cartagena, Huelva, Seville, and Cadiz also import coal, and the quantities taken by these vary from 40,000 to 100,000 tons each. The mineral resources of Spain are very considerable, and if the Spaniards were generally more commercially and industrially inclined, and possessed of a greater measure of energy, this country would prosper and be able to take its place in the front rank of commercial nations.

Parliamentary Jottings.

BOUNTIES ON SUGAR.

In the House of Commons on Monday Mr. Balfour informed Mr. Lawrence that the Government could not, in the present state of business, promise a special opportunity for discussing the question of bounties on sugar.

LEAD AND PHOSPHORUS POISONING.

Mr. Jesse Collings informed Mr. Tennant that the Home Secretary hoped, soon after Easter, to make a statement as to the action the Government proposed to take in regard to recent official reports on these questions as well as on the question of shop clubs.

SALE OF FOOD AND DRUGS BILL.

On the motion to commit this Bill to the Standing Committee on Trade.

Sir W. Foster opposed the motion He pointed out that the debates upstairs were not adequately reported, were ineffective, and led to the wasting of time in the later stages of the Bill. He urged that the Bill should be considered in Committee of the whole House.

Sir Mark Stewart and Mr. Lough expressed similar views.

Mr. Seely asked for an assurance that favourable consideration would be given to amendments designed to avoid inconvenience and loss to small tradesmen.

The Speaker said this was not the occasion for discussing how amendments should be dealt with by the Government.

Mr. Fletcher Moulton regarded the proposal as a decision that adulteration was to be considered from the point of view of trade competition, and there was much in the Bill to countenance that view.

Mr. Walter Long said that if it were true that speeches were not adequately reported that was a great calamity no doubt. (Laughter.) But if hon members bestowed the same attention on the speeches they made upstairs to those they delivered in the House they would probably be sufficiently reported to enlighten the outside public. He pointed out that the Bill was one which required technical and expert knowledge, and that no wrong could be done by sending it to a Grand Committee. The Government were only anxious to get their business through in the most expeditious manner, and that most likely to be convenient to hon. gentlemen.

Mr. Lloyd Morgan supported the motion, which was agreed to.

NOTES ON FOREIGN CHEMICAL TRADE.

GALVESTON.

Oilcakes, etc.—Exports of other cotton products such as cotton-seed meal and cake, cotton-seed oil also increased, the former being 229,085 tons, value £863,388, as against 164,863 tons, value £650,418. in 1897, and the latter 5,372,124 gallons, value £357,129, as compared with 4,490,341 gallons, value £236,364. in 1897.

Among the imports of goods of British production we notice *salt* £2,980., as against £1,533. in 1897; *sheep-dip* and *chemicals* (duty free), £8,145., against £5,156 In chemicals paying duty Great Britain supplied to the value of £635., Germany £5,162, Italy £4., and Belgium £167. The following is a summary of the exports to the British Empire:—

	1897.	1898.
Cotton-seed oilcake and meal	£76,061	£34,146
Cotton-seed oil	6,614	3,906
Spelter	110,393	65,571
Lead	38,354	—*
Borax	57,045	60,743
Copper and copper-matte	18,816	—*
Sundries	10,448	17,315

* Included in "sundries."

HAVRE.

Dyewoods.—The manufacturers of logwood extract at Havre, which is the principal European centre of this industry, are alarmed at the progress made by aniline dyes, which are now competing successfully with the colours extracted from logwood. The competition of chemical colours has now assumed considerable importance in the case of other dyewoods.

The imports of fustic amounted to 9,208 tons, against 11,044 tons in 1897. Prices declined about 10 per cent., except in the case of Jamaica wood, and the colony, thus encouraged, exported to Havre 1,437 tons. No fustic was received from Jamaica in the previous year.

The competition of chemical colours has again pressed severely on the market for redwood, and only 477 tons were imported, against 996 tons in 1897 and 2,526 tons in 1896. This wood is now, however, in good demand, and prices are improving.

The imports of Quebracho amounted to 10,425 tons, against 8,912 tons imported in 1897. This wood is used at Havre for manufacturing tanning extracts, which, when prepared, are largely exported to Germany.

Imports, etc.—The following is a summary of the imports of British goods in 1897 and 1898:—

	1897. Tons.	1898. Tons.
Artificial manures	449	36
Coal-tar	10,827	6,236
Boracic acid	1	2
Caustic soda	14	52
Bi-carbonate of soda	54	18
Crude salts of ammonia	50	30
Chloride of lime	35	—
Superphosphate of lime	540	724
Sulphate of copper	50	25
Oil paints	46	8
Soap	—	1

In the exports, ochre to the extent of 1,013 tons, as compared with 1,170 tons in 1897; oilcakes, 3.750 tons, against 8,236; and oils, 5,928 tons, against 6,120 are noteworthy.

At Caen 567 tons of coal-tar were exported, against 527 tons in 1897. In the imports we find 4,502 tons, compared with 2,721 tons in 1897, while nitrate of soda figures with *nil* against 500 tons in 1897.

HONFLEUR.

Fertilisers, etc.—Several articles of import, such as pyrites and phosphates, for the manufacture of chemical manure, superphosphate of lime, etc., are imported in large quantities to this port, the use of chemical manure being now in great favour by the farmers. The following figures afford a comparison with 1897:—

	1898. Tons.	1897. Tons.
Cement	245	247
Nitrate of soda	1,225	2,066
China clay	323	488
Phosphates	3,922	—
Pyrites	3,906	—
Petroleum	900	848
Superphosphate of lime, ammonia salts, etc.	3,531	—

ANCONA.

The imports of *sulphate of copper* from Great Britain amounted to 1,077 tons in addition to 470 tons of oxides and acids. The prices for sulphate of copper reached 68 lire the quintal (£2. 10s. per 220 lbs.) due to the increased consumption for preventing disease of the grape vines.

The imports of *pig-iron* from Great Britain amounted to 1,075 tons, and prices averaged 110 lire the quintal (£4 1s. 6d. per 220 lbs.)

Sulphur.—The mines at Bellisio, province of Ancona, the property of a German Syndicate, produced 8,500 tons of raw brimstone and refined sulphur in 1898, which were exclusively used in Italy for the cultivation of the grape. The consumption and price of this article increase every year.

Within this district concessions for the search of sulphur have been granted, but operations are paralysed for want of capital. From excavations made in one or two localities it is reported that the quantity obtainable would be superior to all the Romagna mines, but development is impossible under actual circumstances.

The metallurgical establishment, mentioned in the report for 1897 as having been reopened on a limited scale, has now been definitely leased to a company of capitalists for a term of 25 years with power to extend to a further period of 20 years.

MERCURIAL POISONING.—The Home Secretary gives notice that on the 27th March be made an order, under section 29 of the Factory and Workshop Act, 1895, applying the provisions of that section to cases of mercurial poisoning in factories and workshops.

COAL IN KENT.—The coal borings which the Kent Coal Exploration Company has been carrying on at Barham, midway between Canterbury and Dover for several months past successfully struck the coal measures on Friday last week, the result being officially confirmed on Saturday by Professor Boyd Dawkins, the geological adviser to the board. The boring is about nine miles inland from the point at Dover where the coal seams were discovered by Mr. Francis Brady, C.E., and where the pits are now being sunk. The discovery at Barham is of great importance, as it undoubtedly proves the continuity of the coal measures between Dover and that point, the area between these two positions being a very extensive one. The coal strata was entered at almost identically the same depth as at Dover, which would show that it is horizontal. Judging from this fact, it is considered highly probable that the coal measures extend further northward in the direction of Canterbury. The boring is being continued with great care and precaution.

Trade Notes.

The Dangers of Erythrol Tetranitrate.—We have received the following official notice from the Home Office, Whitehall, S.W. :—"Sir,—An accident by which a chemist lost his life happened at a tabloid factory at Dartford, on the 15th of December, 1897. He was engaged in mixing tetranitrate of erythrol with finely powdered lactose in a mortar when an explosion occurred. Again, at the end of 1898 an accident was caused by tetranitrate of erythrol being inadvertently thrown into a fire, and one person was injured. Tetranitrate of erythrol is possessed of explosive properties and is highly sensitive, more so indeed to percussion than dynamite or guncotton. As it has lately come into some use in the place of nitro-glycerine as a remedy for angina pectoris I should be glad if you would draw special attention in your Journal to the dangers attending the handling of this drug."—Col. A. Ford, H.M. Chief Inspector of Explosives.

Japanese Matches.—Of matches as well as of most other manufactures in Japan, complaint has been heard time and again, says the *Kobe Chronicle*, from the markets to which they have been exported. We now gather from a vernacular contemporary that Japan is fast losing the trade ; Japanese matches are being ousted by matches of Swedish manufacture which are bounty-fed, but are still three yen per ton dearer than Japanese matches. The reason why Japan is fast losing the market in India and China is, as a vernacular contemporary remarks, because Swedish matches are of better quality, not a single bad stick being found in a box, while there is an average of three bad ones in each small box of Japanese matches—with regard to which we may say that if the average is above three the matches exported are infinitely superior to those retailed in Japan. However, the market is now described as extremely dull, and several firms are not touching the business. Consequently there is some talk among members of the local guild to suspend the manufacture of matches at the end of the year for a period of about six weeks.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are almost unsaleable, even at 7d. for 90's and 7½d. for 50/90's. Creosote is very firm, and in such good demand that prices may even yet be advanced. Carbolic acids are steady and unchanged, the tone of the market being of a holiday character. Naphthas are also quietly steady. Pitch is well maintained at 26s. f.o.b. East coast, and 23s. 6d. West coast.

Sulphate of ammonia is very firm, with a brisk demand. The forward position is attracting more attention since the scarcity of sulphate has become so apparent, much of the April output having been placed. Makers are willing to concede 10s. to 15s. off spot values, and buyers are beginning to realise that they will have to cover their needs at makers' prices rather than their own. Closing spot prices are :—London (outside makes), £11. ; Hull, £11. ; and Leith, £11 2s. 6d. Beckton quotation has been withdrawn.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade, business continues brisk. There is a good all round demand, and for export, bleaching powder is in especially strong request ; hardwoods at £4. 17s 6d. to £5., f.o.b. Saltcake is also in better demand, both for home and export trade, value being 30s. per ton at Lancashire works, and 30s. to 32s. 6d., f.o.b. Tyne, Liverpool, &c. Caustic soda all round is steady, both for prompt and forward delivery, and prices are unchanged, viz., f.o.b. Liverpool, 77%, £7. 12s. 6d. ; 74%, £7. 7s. 6d. ; 70%, £7. ; 60%, £6. per ton, 10 ton lots. Ammonia alkali remains firm at £3. 17s. 6d., bags, f.o.r. Chlorates of potash and soda are in the same position as for some time past, and prices are respectively 3½d. and 3¾d. per lb. Sulphur is firm at £4. 10s. to £4. 12s. 6d. per ton, f.o.r. Sulphate of copper is rather easier at £24., f.o.b. For soda crystals and bicarbonate, prices are stationary and demand is good. Potash, caustic and carbonate. are in continued good inquiry, and values are steady at £22. for 90 % caustic, and £15. 10s , c.i.f., for 90 % carbonate. Yellow prussiate of potash is firm at 7½d. to 7¾d. per lb. For prussiate of soda there is considerable inquiry, and price firm at 5¾d. per lb. White powdered arsenic has again advanced in price to £17., Garston, owing to reduced stocks and more active buying. Brown acetate of lime has steadied down at £5., c.i.f.; grey, £7. 15s. to £8. per ton. White sugar of lead : foreign, £25. 10s. ; *and English, £26. per ton. Other lead salts firm*, as also are zinc and *tin salts. Borax is steady at £15. 15s. to £16.* per ton. Carbolic acid, crystals and liquid, show a slight improving tendency. Aniline oil and salt are unaltered in price, and with only moderate demand. Glycerine is rather disposed to be firmer. Sulphate of iron is in better request, but prices still rule low. Generally speaking, the demand for chemicals in the textile frades is somewhat quiet.

THE METAL MARKETS.

LONDON, Wednesday.—Pig iron firm : Scotch warrants closed at 54s. 10d. ; Middlesbrough, 48s. 6d. cash ; and hematite, 59s. Copper easier : Chili bars, G.O.B.'s and G.M.B.'s, closed at £69. 10s. to £69. 15s. cash, and £69. 15s. to £70. three months. Tin quiet : Straits closed at £109. 17s. 6d. to £110. 7s. 6d. cash, and £110. 7s. 6d. to £110. 17s. 6d. three months ; Australian, £110. 10s. ; English ingots, £113. Lead steady : Spanish, £14. 6s. 3d. ; English, £14. 10s. ; Silesian spelter, ordinary, £27. 15s. Nickel, 1s. 2½d. Antimony, £38. 15s. Quicksilver : First hands, £8. 5s. ; second hands, £8. 2s. *Copper shares* steady : Cape, 4 to 4⅛ ; Copiapo, 3¼ to 3⅜ ; Libiola, 2 1/16 to 2 3/16 ; Mason and Barry, 3¾ to 4 ; Rio Tinto, 40 9/16 to 40 11/16 ; Tharsis, 8⅜ to 8⅝.

GLASGOW, Wednesday.—Market easier, and a good business. Scotch done at 54s. 10d. 54s. 9d., and 54s. 9½d. cash ; also at 55s. 1½d., 54s 11½d., and 55s. 0½d. month ; buyers, 54s. 9½d cash ; sellers, 54s. 10d. Cleveland done at 48s. 5½d. to 48s. 6d. cash, and 48s. 8d. to 48s. 8½d. month ; buyers, 48s. 5½d. cash ; sellers, 48s. 6d. Cumberland hematite done at 59s. to 59s. 3½d. month ; buyers, 59s. 11½d. cash ; sellers, 59s 0½d. Middlesbrough hematite, buyers, 60s.

LIVERPOOL OIL AND COLOUR MARKET.

Wednesday.

OILS.—Palm oil is in fair request at recent rates, but business has not been on a very extensive scale. Olive is only in limited demand, but so far holders are very firm. Linseed steady at 19s. 3d. to 19s. 6d. cwt. for Liverpool makes in export casks. Cottonseed firm with sellers asking 17s. 6d. to 18s. cwt. for Liverpool refined. Castor oil dull and slow of sale at 2 15/16d. for good seconds Calcutta, first pressure French 2¾d. to 2⅞d. per lb. Tallow is in quiet demand at full prices, but there is nothing approaching activity in the market. Resin steady, but only a small business doing in all spot grades. Spirits of turpentine easier, there being spot sellers at 34/3 cwt.

CAKES.—Further arrivals of American Western linseed have given a quieter tone to the market for spot parcels, and prices have again given way 2s 6d., but at the quotations now current a fair amount of business has been concluded, and the value at the close is £6. 1s. 3d. to £6. 10s., whilst quotations of other imported descriptions are nominally unchanged, with supplies in a small compass at £6. 15s. to £7. 5s. for Bombay, and £7. 7s. 6d. per ton for Russian. A partial decline of 2s. 6d. is registered in the value of Liverpool makes, but moderately fair sales have been effected at £7. 17s. 6d. to £8. 10s. per ton, according to brand, and the market closes steady thereat. A fair inquiry has been experienced for good to choice brands of American decorticated, and the quotation is steady and without alteration at £5. 12s. 6d. to £6., according to quality, whilst the demand for Liverpool makes has again ruled quiet at £6. 5s. to £6. 15s. per ton, according to brand. A slightly easier rate is quoted for Liverpool makes of undecorticated, but a fair trade has been done at £4. 15s. to £5. 5s., according to brand, and Egyptian on the spot meet a steady inquiry at £4. 7s. 6d. to £4. 10s. per ton, according to quality.

COLOURS.—Prices are steady, and practically without change. Ochres : Oxfordshire—common £10., medium £12., best £15. ; Derbyshire—common 40s., medium 50s., best 60s. ; Welsh—best 90s. ; seconds, 50s., and common, 18s. ; Devonshire, 40s. to 45s. ; French, J.C., 65s. Umber : 40s. to 45s. White lead : £16. Red lead unchanged. Venetian red : £6. to £10. Cobalt : Prepared oxide, 9s. 9d. ; black, 9s. ; blue, 6s. Oxide of iron : Common, £7. ; medium, £10. ; finest, £20. Zinc oxide : £22. 10s to £25.

HULL PAINT, OIL, AND COLOUR REPORT.

Tuesday.

OILS.—The demand is quieter, being towards end of the quarter, yet prices are well sustained. The following are amongst the principal imports here up to date as against the corresponding period of 1898. Wheat, 471,328 qrs. against 558,287 qrs. ; flour, 126,535 cwts. against 48,673 cwts. ; linseed, 79,683 qrs. against 54,860 qrs. ; rapeseed, 39,170 qrs. against 22,770 qrs. : cottonseed, 51,140 tons against 75,592 tons ; oilcake, 7,672 tons against 5,084 tons ; olive oil, 806 tuns against 1,019 tuns ; tar, 888 barrels against 655 barrels. Linseed oil in sympathy with seed is firm, being quoted 17s. 6d. spot, naked ; 17s. 4½d. month ; 16s. 7½d. May/August ; 16s. last four months. boiled and refined, £1. to £1. 10s. per ton extra. Refined cotton oi

quiet, 15s. 7½d. spot and to August; crude ditto, 14s. 4½d. Casks £1. and barrels £1. 10s. per ton extra. Castor oil, extracted here, cold drawn pharmaceutical, in barrels, 28s. 6d. per cwt.; in cases, 3½d. per lb.; pure firsts, in barrels, 26s. per cwt; in cases, 3⅛d. per lb.; pure seconds, in barrels, 25s. per cwt.; in cases, 2⅝d. per lb. Turpentine, 34s. 9d. to 35s. per cwt. Resins from 4s. 9d., according to grade. Olive oil unchanged. Olive oil soap, £16. to £18. per ton. Arachide nut oil from 26/- per cwt. Oleines, in sympathy with fats, remain firm and unchanged, £18. 10s. to £21. per ton. Cod oil, £16. to £18. per ton.

CAKES.—The market continues good and prices but little changed. Linseed cakes a trifle easier, shewing a reduction of 2s. 6d. per ton upon the week, 95% pure being quoted £7. 17. 6d. to £8. Oilcakes (linseed) £6. 17s. 6d. to £7.; Russians, £7. to £7s. 10s. Cotton cakes show no material alteration, best makes being quoted £5. to £5 5s. per ton; seconds from £4. 17s. 6d.; decorticated, £6. 2s. 6d. to £6. 10s. Rape cakes: Black Sea, £4. 2s. 6d. per ton.

PAINTS.—The market continues healthy, with prices practically the same. Paints, ordinary colours, from £10. per ton; ready mixed from 24s. per cwt. Black varnish, £5. 15s. per ton. Paint remover from 30s. Other varnishes unchanged.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, Tuesday.

Sulphate of ammonia has marked its upward career by a very notable leap since the beginning of last week. Prompt f.o.b. Leith quickly brought £11., and not stopping at that £11. 2s. 6d. was done before the close of the week. An offer of £11. 3s. 9d. was subsequently made and promptly declined by the makers, who have become more independent than ever. Both sides are getting a little anxious about forward fixtures (for some time quite a blank), and some little business has been carried through at slightly under the prompt price. Nitrate of soda is also strong at 8s. 6d. to 8s. 9d. The other chemical lines have been showing very little of change. Sulphate of copper is rather cheaper in second hands, but the makers still hold to their £25. figure—and the position of the metal on the market seems to warrant that attitude. Stocks of common chemicals are being added to in view of re-opening of Baltic outlet. Prices of these are unchanged. Mineral oils and paraffins also unchanged.

Chief prices current are:—Soda crystals, £2. 5s. to £2. 7s. 6d. basis nett, Tyne; soda ash, £4. 2s. 6d. to £4. 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 5s. to £4. 15s. nett, Glasgow; caustic soda, white, 74° £7. 7s. 6d, 70/72° £7., 60/62° £6., and cream 60/62° £6., all nett, Liverpool; bleaching powder, 35/37°, £5. to £5. 10s. nett, Tyne; saltcake, 29s. to 30s; borax, English refined, £16., and boracic acid, £26. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s., nett, Liverpool; bichromate of potash, 3½d., less 6% for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d., less 6% for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow); chlorate of potash, 3⅝d., less 5% Liverpool; nitrate of soda, 8s. 6d. to 8s. 9d.; sulphate of ammonia, £11. 2s. 6d. to £11. 5s. prompt, f.o.b. Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £24. 5s., less 5% Liverpool; paraffin scale, hard, 1⅞d. to 2d. per lb., and soft 2d. per lb.; paraffin wax, 120° semi-refined, 2¼d. to 2½d. per lb.; paraffin spirit (naphtha), 9d. to 10d. per gal; paraffin oil (burning), No. 1, 6½d.; and crystal, 7d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 10s. to £5. 5s., 885° £5. 10s. to £6., and 890/895° £6. 5s. to £6. 10s. Week's imports of sugar at Greenock were *nil*.

TYNE CHEMICAL REPORT.

Tuesday.

Chemicals continue without much alteration, though with opening of navigation in the Baltic the demand should improve. Soda crystals are £2. 12s. 6d. per ton, gross weight, locally. Caustic, 70% £7., and 76/77%, £8. per ton. Bleaching powder is in rather better request at £5. 5s. to £5. 10s.

Bleaching powder, softs, £5. 5s. per ton, nett; do., hards, £5. 10s. per ton, nett; caustic soda: 76/77% £8., and 70% £7. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75°Tw., £2. 12s. 6d. per ton, nett; do., 100°Tw., £3. per ton, nett; do., 140°Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. od. per ton, nett; blanc fixe, £6. 10s. per ton nett; chloride of barium, refined crystals, £6. 15s. od. per ton, nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt steady at 9s. 6d. per ton, f.o.b. Tees, with a good demand.

COALS.—The market is very firm for this and next week's delivery, and there is a strong demand, which fully maintains prices. Coke is also in strong request, and is quoted at 20s. to 23s. per ton, according to quality. To-day's prices:—Best Northumbrian steam, 11s. to 12s. per ton; second qualities, 10s. to 11s. per ton; small steam, 4s. 9d. to 5s. per ton; gas coals, 10s. to 11s. per ton; bunker coals, 8s. to 8s. 6d. per ton; household coals, 10s. to 11s. per ton; coke, 20s. to 23s. per ton.

New Companies.

Acetylene Purifying Co., Ltd.—Capital £5,000 in £1. shares. This company has been formed to acquire, own and work A. R. Franck and G. Dollner's invention for the purification of acetylene gas.

Empire Steel Cask Co., Ltd.—Capital £7,000. in £1. shares. This company has been formed to acquire the business carried on by E. Redman at Black Bull-street, Hunslet, Leeds, as the Empire Steel Cask Co., and to carry on the business of engineers, stampers, pressers, piercers, brass founders, and finishers, etc.

Eastern Oil Co., Ltd.—Capital £250,000. in £1. shares. This company has been formed to acquire any petroleum or oil bearing lands in Russia or elsewhere, to sink wells and make borings, and to refine and deal in petroleum and other mineral oils and products thereof. The subscribers to the memorandum of association are:—J. W. B. Newton, 79, Mark-lane, E.C., merchant; E. D. Miller, Spring Hill, Rugby, gentleman; F. F. Daniell, Manor House, Coates, Glos., gentleman; A. Stourton, Holm Hall, York, gentleman; J. S. Barwick, Sunderland, shipowner; C. W. M. Dale, South Bailey, Durham, bank secretary; J. W. Taylor, Sunderland, shipowner.

Central Italian (M.S.T R.) Sulphur Co, Ltd.—Capital £400,000. in £1. shares. This company has been formed to acquire the mines and surface rights of Signor Trezza di Musella, situate in Italy, and to carry on the business of sulphur miners, manufacturers, refiners and merchants. The subscribers to the memorandum of association are:—T. E. Cowan, 18, Austin Friars, E.C., solicitor; A. E. Hale, 47, Ranelagh-road, Paddington, W., clerk; H. J. Wells, 5, Victoria Grove, Stoke Newington, clerk; A. J. Wells, 5, Victoria Grove, Stoke Newington, clerk; W. E. Shawyer, 84, Earl-street, Edgware-road, N.W., clerk; F. Green, 19, Guildford-road, Stockwell, S.W., clerk; W. A. Pittman, 38, Nightingale-road, Harlesden, gent.

Pure Salt, Ltd.—Capital £150,000 in £1. shares. This company has been formed to acquire certain rock salt mines near the village of Remolinos, Spain, and to manufacture salt, alkali, and any other minerals and chemicals, and the products thereof. The subscribers to the memorandum of association are—R. S. Crosfield, 159, Bridge-road, Battersea, accountant; J. Dobson, 34, Pemberton-road, Harringay, N., clerk; R. I. Winterbottom, 47, Chepstow Place, Bayswater, solicitor; W. Robbs, 50, The Grove, Ealing, W., solicitor; R. C. Hart-Dyke, The Firs, Copse Hill, Wimbledon, solicitor; J. Vivian, 15, Acris-street, Wandsworth, clerk; C. E. Brooks, 92, Landsdowne-road, Stockwell, clerk. Registered office, 37, Queen Victoria-street, E.C.

J. Waterhouse & Co., Ltd.—Capital £25,000. in £10. shares. This company has been formed to acquire and carry on the business of wholesale druggists and drysalters carried on by C. H. Waterhouse and G. E. Macdonald at 6, Church-street, Old Square, Ashton-under-Lyne, as J. Waterhouse and Co. The subscribers to the memorandum of association are:—C. H. Waterhouse, Westfield, Ashton-under-Lyne, wholesale druggist; G. E. Macdonald, Dunedin, Alderley Edge, Ashton-under-Lyne, wholesale druggist; J. R. Widdop, Aingarth, Smallshaw, Ashton-under-Lyne, traveller; C. Woodhead, 9, Cranbrook-street, Ashton-under-Lyne, traveller; J. Higgin, 4, Taunton-road, Ashton-under-Lyne, traveller; T. Evans, 35, Blandford-street, Ashton-under-Lyne, traveller; J. James, 9, Chapel-street, Hooley Hill, near Manchester, traveller.

Gazette Notices.

PARTNERSHIP DISSOLVED.

H. Thornton and F. W. Saunders, oil and colour merchants, Tottenham Court-road, and Goodge-street, W., under the style of Messrs. Goldsmith & Co.

BANKRUPTCY ACTS, 1883 and 1890.

Adjudication.

Ethelbert, Foster, chemical manufacturer, Widnes.

IMPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.
Week ending March 18th.

Acetic Acid—
Germany, 2 pks. Elkan & Co.
Holland, 10 F. Bochin

Acetone—
Germany, 10 dms. J. Norrenberg & Co.
" 25 cks. Thames S. T. & L. Co., Ld.
Holland, 10 Vokins & Co., Ld.

Acids—
Holland, 84 pks. Little & Johnston

Alkali—
U. States, 17 t. J. Barber & Co.
France, 2 "
" 272 c. J. Harrison

Alum—
Germany, 100 bgs. R. W. Greeff & Co.
Holland. 450 pks. J. White

Ammonium Muriate—
Holland, 20 cks. H. Lorenz

Ammonium Phosphate—
Holland, £45 Chemical Works

Antimony Ore—
Germany, 5 t. Hunt & Kerr
Australia, 7 Hale & Son

Arsenic—
Portugal 73 brls. Coverley & Westray

Barium Chloride—
Holland, 22 cks. Petri Bros.
Germany, 22 "

Barium Sulphate—
Belgium, 104 cks. J. L. Lyon & Co.
Holland, 18 T. H. Lee
" 35 B. Jacob & Sons

Barytes—
Holland, 105 cks. W. Harrison & Co.
" 40 J. Owen
Germany, 15 H. Lambert
" 20 Steinhoff, Sons & Co.
Holland, 100 bgs. W. H. Carey & Sons
Holland, 100 T. H. Lee
Belgium, 40 cks. W. Balchin, Ld.

Bones—
Adelaide, 2 t. Goad, Rigg & Co

Caoutchouc—
Madagascar, 1 c. Prop. Bull Wf.
Germany, 1 Butler's Wf., Ld.
France 54 Girard Brs. & Co.
B. Guiana, 5 R. G. Hall & Co.
Natal 1 Lewis & Peat
B. Honduras, 4 "
Congo. 107 W. A. Collins
E. Indies, 18 L. & I. D. Jt. Co.
Straits, 110 Elkan & Co.
U. States, 36 L. & I. D. Jt. Co.
Zanzibar, 72 "
B. Honduras, 7 "
" 21 Prop. Bull Wf.
Straits, 110 E. Boustead & Co.
Sydney, 9 S. Figgis & Co.
Natal, 45 J. H. Bower & Co.
Germany. 150 W. Pope & Co.
France, 23 W. Balchin, Ld.
U. States, 36 Chautard & Christensen

Castor Oil—
France, 30 brls. Beresford & Co.
" 30 Lucas & Spencer's Wf., Ld.
" 50 cs. Lon. & Til. Ltge. C. & D. Co., Ld.

Caustic Potash—
France, 36 dms. Petri Brs.
Germany, 30 J. M. Steel & Co.
" 34 Sth. Devon Wf. Co., Ld.
France, 6 t. A. J. Luke & Co.

Caustic Soda—
France, 5 t. W. H. Carey & Sons

Chemicals (*otherwise undescribed*
France, £47 Mory & Co.
U States, 495 B. & F. Wf. Co., Ld.
" 150 pks. Seaward Bros., Ld.
Norway, £140 R. Greening
Germany, 1,000 L. & I. D. Jt. Co.
" 11 Butler's Wf., Ld.
" 6 Argo S. S. Co.
Holland, 24 T. H. Lee
" 7 H. Lorenz
France, 10 P. & O. Co.
Belgium, 119 T. Palmer
" 5 T. H. Lee
Germany, 126 Craven & Co.
Holland, 95 Little & Johnston
Germany, 326 A. & M. Zimmermann
Holland, 7 Beresford & Co.
U States, 13 R. E. Drummond
Belgium, 128 John Cockerill Line
Holland, 3 L. C. & D. Rly. Co.
" 20 R. W. Greeff & Co
Germany, 10 t. H. Lambert

Citrate Lime—
Italy, 46 cks. B. Jacob & Sons
" 89 Thames S. T. & L. Co., Ld.

Coal Products—
Pitch
W. Indies, 500 brls. L. & I. D. Jt. Co.
N. Russia, 67 cks. F. & S. Chiesman & Co.
U States, 1 F. Gardner
Tar
N. Russia, 62 cks. Linck, Moeller & Co
" 65 brls. Mordaunt Bros.
" 170 F. & S. Chiesman & Co

Cream of Tartar—
Madagascar, 8 cks. Kirkpatrick, Barr & Co
France, 5 F. C. Devon & Co.
Sydney, 4 Kearley & Tonge, Ld.
U. States, 5 M. Ashby, Ld.
France, 2 T. Trapp & Sons
" 5 M. Ashby, Ld.
" 10 W. C. Bacon & Co
" 4 L. & I. D. Jt. Co.
Spain, 6 B. & F. Wf. Co., Ld.
Holland, 6 Kirkpatrick, Barr & Co.
France, 9 C. Atkins & Nisbet

Cresoline—
U. States, 48 cs. Lunham & Moore

Disinfectants—
Germany, 46 cs. A. & M. Zimmermann

Dyestuffs—
Argols
Italy, 437 bgs. B. Jacob
441 pks. & Sons
" 198 Thames S. T. & L. Co., Ld.
Cochineal
Canary Is., 10 bgs. W. M. Smith & Sons
Extracts
Canada, 270 cks. Boutcher, Mortimore & Co
" 60 Furness, Withy & Co.
France, 100 L. J. Levenstein & Sons
Denmark, 3 M. D. Co.
Holland, 50 J. Norrenberg & Co.
U. States, 20 kgs. W. C. Barnes & Co.
France, 25 pks. B. & F. Wf. Co., Ld.
Indigo
Holland, 1 cht. Pickford & Co.
Germany, 8 snrs. E. Jacob & Co
E Indies, 7 cs. Gray, Dawes & Co.
" 50 chts. Wallace Bros
" 118 E. Bower & Co.
" 72 Darling Bros.
" 558 pks. A. B. Curtis & Co.
" 56 chts. Elkan & Co.
" 11 Elkan & Co.
" 1 bx. 5 Mortgomerie & Workman
" 22 A. Faber & Co
" 47 Becker, Ross & Co.
" 302 J. Karplees & Co.
" 22 Ralli Brs.
" 108 Fruhling & Goschen
" 83 J. Hatton Hall & Co.
" 42 pks. A. B. Curtis & Co.
" 7 cs. Lon. & Til. Ltge C. & D. Co., Ld
Holland, 4 chts. Pickford & Co
Belgium, 2 John Cockerill Line
E. Indies, 6 chts. Croysdale & Co
" 124 Parry & Co.
" 519 pks. P. & O. Co.
" 242 chts L. & I. D. Jt. Co.
Myrabolams
E. Indies, 25 bgs. L. & I. D. Jt. Co.
" 600 Culverwell, Brooks & Co.
" 950 Dalton & Young
" 1,308 Darling Bros.
" 800 pks. P. & O. Co.
Orchella
Portugal, 12 bls. Prop. Bull Wf
Safflower
Italy, 1,000 pks. A. Slator & Co.
Shumac
Italy, 50 bgs. W G. Jacobs
" 500 W Shelcott & Sons
" 1,400 J. Kitchen, Ld.
" 168 J. W. Cook & Co., Ld.
" 500 Beresford & Co.
Tanners' Bark
Natal, 50 t. H. Devitt & Co
" 40 Boutcher, Mortimore & Co.
" 80 A. & W. Nesbitt
" 6 Flack, Chandler & Co.
Belgium, 57 t. Hicks, Nash & Co.
Tumeric
E. Indies, 31 bgs. Baxter & Hoare
Cochin, 77 Butler's Wf., Ld.
Valonia
A. Turkey, 137 t. Adam Brs.
" 102 Anning & Cobb
Norway, 41 A. & W. Nesbitt
A. Turkey, 25 H. Smith

Farina—
Germany, 100 bgs. G. Hornzee
Holland, 75 J. Barber & Co.
Belgium, 100 cs. T. H. Lee
Germany, 150 bgs. J. Barber & Co.
Holland, 50 J Knill & Co.

Glucose—
France, 200 pks. 200 cwt. Trier, Meyer & Co.
Belgium, 250 250 L. Norman & Co., Ld.
France, 450 450 W. E. Cole
U. States, 250 250 Trier, Meyer & Co.
" 100 50 Deering & Robottom
Germany, 10 40 A. E. Piggott
U. States, 1000 1,000 Pickford & Co.
" 300 559 C. Barnard
" 1,250 1,250 E. Thompson & Co.
" 2,000 2,000 Bellamy's Wf., Ld.
" 100 300 E. & T. Pink
" 50 300 C. Southwell & Co.
" 5,199 16,149 R. G. Hall & Co.
" 50 291 Ohlenschlager Bros.
" 450 1,250 L. Norman & Co., Ld.
" 5 28 W. France & Co., Ld.
" 250 250 Pearce, Pelly & Co.
" 250 250 C. Mangold & Co.
" 600 1,100 L. & I. D. Jt. Co.

Glue—
Germany, £11 L. & I. D. Jt. Co.
" 240 W. W. Jones & Co
France, 91 Mory & Co
Germany. 125 Argo S. S. Co.
France, 70 W. J. Davies & Sons
Holland, 60 "
" 23 T. H. Lee
" 26 A. G. Robinson & Co.
Belgium, 30 Leach & Co.
France, 119 Burnett Brs. & Sons
Holland, 60 J. Barber & Co.
France, 9 E. Flageollet & Co.
" 48 J. Harrison
" 1,510 T. M. Duche & Sons
U. States, 190 H. Grey, Junr.
Belgium 1,408 T. M Duche & Sons

Glycerine—
France, £660 J. W. Cook & Co., Ld.
" 35 J. L. Lyon & Co.

Gutta Percha—
Straits, 267 c. Anderson, Weber & Smith
" 670 H. W. Jewesbury & Co.

Iron Bromide—
Germany, 10 cks. A. & M. Zimmermann

Iron Oxide—
A. Turkey, 59 bgs. L. & I. D. Jt. Co.

Manganese Ore—
Germany, 2 t. Pickford & Co.

Manure—
Germany, 49 t. Perkins & Homer
Germany. 100 t. F. W. Berk & Co.

Methyl Alcohol—
Germany, 1,080 g. Tingle, Jacobs, & Co.
France, 470 Lister & Biggs

Molasses—
Holland, 50 cks. 280 c. J. R. Francis & Co.
U. States, 201 1,131 J. Forsey

Ochre—
Holland, 24 pks. Phillipps & Graves

Oxalic Acid—
Belgium, 20 pks. R. W. Greeff & Co.

Paraffin Wax—
U. States, 375 cs. Anglo-American Oil Co.
" 300 brls. Mordaunt Brs.
" 300 Beresford & Co.

Phosphates—
Algeria, 1,400 t. A. Hunter & Co
France, 140 "
" 210 D. de Pass & Co.
" 385 West & Penrose
" 200 J. Harrison
Belgium, 150 Anglo-Contl. Guano Works

Potassium Bichromate—
Germany, 1 ck. R W. Greeff & Co.

Potassium Carbonate—
Germany, 1 t. R. W. Greeff & Co.
" 7 8 c. H. Lambert
" 25 Petri Brs.
France, 4 4 cks. J. A. Reid

Potassium Oxalate—
Holland, 20 kgs. R. W. Greeff & Co.

Pyrogallic Acid—
Holland, 2 pks. J. W Cook & Co., Ld.

Red Lead—
Holland, 17 cks. Randall Brs.
" 19 J. Owen
" 41 D. Storer & Sons

Rosin—
U. States, 500 brls. Moore & Hole
Holland, 6 cks. J. Owen
Germany, 100 F. V. Pryor

Salicylic Acid—
Germany, 1 pk. Butler's Wf., Ld.

Saltpetre—
Germany, 120 cks. J. Hall & Son, Ld.
" 4 T. Palmer
" 16 brls. L. & I. D. Jt. Co.
" 16 P. Hecker & Co.
E Indies, 580 bgs Lucas & Spencer's Wf.

Soda—
Holland, 10 t. R. W. Greeff & Co.

Sodium Acetate—
Belgium, 36 cks. E. Catlin

Sodium Hypochlorite—
Germany, 200 cs. H. Lambert

Sodium Prussiate—
Germany, 19 cks. J. Owen

Starch—
France, 160 pks Prprs. Dowgate Dk.
" 30 cs. L. Mendelsohn
Holland, 10 A. G. Robinson & Co.
" 1,000 D. R. Wallis
" 1,082 Little & Johnston
" 52 Phillipps & Graves
Belgium, 240 T. H. Lee
" 100 Seaward Brs.
" 254 Leach & Co.
U. States, 260 pks. Beck & Pollitzer
" 1,317 C. Tennant, Sons, & Co.
" 1,400 Union Ltge. Co., Ld.
" 200 bgs. R. G. Hall & Co.
Germany, 117 cs. Argo S. S. Co.
" 2,730 Horne & Co.
——, 120 Becker & Wagner

Stearine—
France, 700 bgs. G. Boor & Co.
" 120 H. Hill & Sons
" 60 cks. "
Belgium, 33 "
" 63 bgs. "
" 63 T. Ronaldson & Co.

Sulphur—
Italy, 5 t. A. E. Piggott
" 15 G. Boor & Co.
" 5 Hyslop & Symonds
" 10 W. G. Jacobs
" 5 J. Puddy & Co.
" 10 H. Grey, junr.

Italy, 13 t. F. & L. Sitzler
" 10 F. Smith
" 10 Curtis & Harvey
" 8 C. & E. Morton
" 20 H. W. Ison
" 10 J. Greig
" 500 Fuerst Brs.
" 13 F. C. Devon & Co.

Tallow—
France, 28 bgs. Orient Co., Ld.
" 150 brls. Price's Pat. Candle Co., Ld.
N. Zealand, 50 cks. J. W. Cook & Co.
" 10 Goad, Rigg. & Co.
" 3 Culverwell, Brooks, & Co.
" 2 J. Graves
" 20 Brown & Elmslie
" 8 Deering & Robottom
Belgium, 20 tins Sawer, Sons, & Co.
" 10 brls. "
Sydney, 341 cks. L. & I. D. Jt. Co.
U. States, 13 Hoare, Wilson, & Co.

Tartar—
Italy, 30 cks. Thames S. T. & L. Co., Ld.
" 20 B. Jacob & Sons

Tartaric Acid—
Holland, 12 pks. Kirkpatrick, Barr, & Co.
Belgium, 12 B. & F. Wf. Co., Ld.
" 13 F. C. Devon & Co.

Ultramarine—
Germany, 1 cs. L. & I. D. Jt. Co.
Belgium, 20 cks. J. Harrison

Varnish—
Belgium, 5 pks. Wilson & Co.
U. States, 6 Dawson Brs.
" 32 Taylor Brs.
Germany, 16 Argo S. S. Co.

Verdigris—
France, 4 cks. B. & F. Wf. Co.

White Lead—
Holland, 51 cks. F. G. Clifford
" 30 Taylor Brs.
" 20 Kerestiji & Co
" 5 Spies Brs.
" 71 Randall Brs.
" 30 J. Owen
" 49 T. & W. Farmiloe, Ld.
Belgium, 10 "
" 56 brls. "
France, 16 Soundy & Sons
Germany, 73 Wilkinson. Heywood, & Co

Wood Pulp—
Sweden, 250 pks. Tough & Henderson
" 200 Henderson, Craig, & Co.
" 104 H. Johnson & Sons
" 1,200 W. G. Taylor & Co., Ld.
Germany, 224 Vokins & Co., Ld.
" 32 S. E. Rly Co.
Portugal, 250 Horne & Co.
Holland, 15 H. Johnson & Sons

Zinc Oxide—
Holland, 51 cks. J. Matton
France, 3 "
U. States, 250 pks. M. Ashby, Ld.
" 100 brls. "
Germany, 100 "
" 500 pks. Soundy & Sons
" 50 Prprs. Do. gate Dk.

Zinc White—
Germany, 26 cks. J. W. Cook & Co.
Holland, 8 R. W. Greeff & Co.
" 120 Spies Brs. & Co.

LIVERPOOL.

Week ending March 16th.

Acetate of Lime—
New York, 1,606 bgs.

Barytes—
Antwerp, 38 cks. 573 bgs.

Bone Ash—
Zarate, 215 bgs.

Bone Dust—
Karachi, 1,000 bgs
St. John, N.B., 515 Woodward & Marquis

Bone Meal—
Calcutta, 2,240 bgs.
Bombay, 17,800
Karachi, 5,000

Bones—
Alexandria, 357 bgs.

Borax—
Antofagasta 4,350 bxs. Pac. B. & R. C. Co.

Castor Oil—
Calcutta, 250 cs. Ralli Bros.
" 580
Marseilles, 70 cks. 5 163 brls.

Caustic Potash—
Antwerp, 20 dms.
Bremen, 17

Chemicals *(otherwise unascribed)*
Boston, 3 pks.

Coal Products—
Alizarine
Bombay, 2 brls. 1 cs.
Aniline Salt
Antwerp, 13 brls.

Colours—
Antwerp, 3 cks.
Boston, 1 bx. Everett & Co.
Bombay, 1 brl.
Rotterdam, 122 cks.

Copperas—
Bremen, 17 cks.

Cottonseed Oil—
Savannah, 3,502 brls.
New York, 2,499

Cream of Tartar—
Bordeaux 40 cks.
St. Nazaire, 1
Barcelona, 4 5 butts
Tarragona, 5

Dried Blood—
Zarate, 850 bgs. J. Nelson & Sons

Dyestuffs—
Cochineal
Africa, 20 bgs. Burrell & Co.
Cutch
New York, 200 bls E. Brownbill & Co
Rangoon, 125 bxs.
Extract
Marseilles, 150 cks.
Fiume, 140 brls.
Bordeaux, 30
Baltimore, 25 McArthur & Co.
Rouen, 260 Co-op. W'sale Society, Ld.
Havre, 22 Cunard S. S. Co.
Fustic
Trieste, 2 t.
Indigo
Calcutta, 361 chts. 9 bxs.
Portland, 10 A. Bell & Co.
Myrabolams
Bombay, 1,300 bgs. W. & R. Graham & Co.
" 14,400 117 cs.
Saffron
Valencia, 1 cs.
Turmeric
Bombay, 153 bgs.

Dyewood—
New York, 1 lot

Dyewood Extract—
Philadelphia, 60 brls.
New York, 100 bxs. 300

Farina—
Trieste, 305 bgs.

Glucose—
Boston, 100 brls.
Baltimore, 550
St. John, N.B., 100 Colby & Co.
" 50

Glue—
Antwerp, 8 cks.
Marseilles, 3 cs.
St. Nazaire, 10 bls.
New York, 5 brls. H. Froude
Rotterdam, 7
Rouen, 132 cks. 100 13 bgs.

Glycerine—
Marseilles, 10 dms.

Linseed Oil—
Hamburg, 1 cs.

Manganese Ore—
Hamburg, 4 chts
Poto, 2,775 t.

Ochre—
Marseilles, 16 cks.
Rouen, 92 Co-op. W'sale Society Ld.

Paint—
Boston, 1 kg. Pearson Bennion
Baltimore, 16 cs. Pitt & Sugar

Paraffin Scale—
New York, 1,335 brls. Thompson & Bedford
Baltimore, 100
New York, 1,156 Anglo-Am. Oil Co.

Phosphates—
Charleston, 990 t.

Potash—
Hamburg, 60 cks.
Rouen, 82

Rosin—
Baltimore, 4,623 brls.
Charleston, 1,500

Saltpetre—
Calcutta, 349 bgs. Ralli Brs
Hamburg, 10 4 brls. 4 cks. 29 kgs.

Soap—
Marseilles, 22 cs. 68 dms.
Boston, 20
Philadelphia, 600 bxs. Lever Brs., Ld.
New York, 45

Soap Stock—
New York, 823 brls.
Savannah, 98
Charleston, 230

Soapstone—
Bordeaux, 400 bgs. Geo. G. Blackwell, Sons & Co.

Sodium Silicate—
Rotterdam, 2 cks.

Starch—
Bremen, 7 cks.
New York, 10 brls.
Antwerp, 214 cs. J. T. Fletcher & Co.
" 653 cs.

Stearine—
Antwerp, 16 bgs. J. T. Fletcher & Co.
" 14

Superphosphates—
Antwerp, 500 bgs.

Tallow—
Zarate, 362 pps. J. Nelson
" 392 brls. & Sons
Boston, 20 tcs.
Barcelona, 48 cks.
Portland, M., 96
New York, 141 tcs. 200 hhds.

Tartaric Acid—
Marseilles, 28 cks.

Ultramarine—
Antwerp, 30 cs

Varnish—
New York, 5 brls. W. A. Warren

White Lead
Antwerp, 22 cks.

Wood Pulp—
Boston, 154 bdls.
Rotterdam, 12 pks.
New York, 4 cks 12 brls.
St. John, N.B., 979 bls.
Halifax, 1,441

Zinc Oxide—
Antwerp, 120 brls.
New York, 230

Zinc White—
Hamburg, 40 cks

MANCHESTER.

Week ending March 18th.

Acetate of Lime—
New York, 2,081 bgs.

Alizarine—
Rotterdam, 98 cks. 2 cs.

Ammonium Chloride—
Hamburg, 1 ck.

Antimony Oxalate—
Rotterdam, 4 cks.

Barytes—
Antwerp, 100 bgs.
Hamburg, 18 cks.
Rotterdam, 2

Calcium Carbide—
Gothenburg, 2 dms. Felber, Jucker, & Co.

Caustic Lye—
Hamburg, 40 dms.

Caustic Potash—
Antwerp, 20 dms.

Chemicals *(otherwise undescribed)*
Rouen, 40 cks.

Chromium Chloride—
Rotterdam, 3 cks.

Coal Products—
Aniline Salts
Rotterdam, 5 cks.
Beta Naphthol
Rotterdam, 1 ck.

Colours—
Antwerp, 11 cs.
Hamburg, 1
Rouen, 3 cks.

Rotterdam, 77 30 2 pks. 2 bgs. 8 bxs. 3 kgs. 11 brls.

Cream of Tartar—
Rotterdam, 40 kgs. 2 cks.

Dyestuffs—
Extracts
Rotterdam, 10 cks.
Indigo
Rotterdam 5 cks.

Dyewood Extract—
New York, 50 brls.

Farina—
Hamburg, 100 bgs.

Glucose—
St. John, N.B., 600 brls.

Glue—
Antwerp, 3 bls.
Hamburg, 20 bgs.
Rotterdam, 7 cks. 325 bgs.
Rouen, 21 cks. 36 bgs. 30

Glycerine—
Rotterdam, 13 dms.

Lead Acetate—
Antwerp, 15 cs.

Litharge—
Rotterdam, 14 cks.

Lithopone—
Rotterdam, 20 cks.

Paint—
New York, 36½ brls.

Paraffin Scale—
New York, 351 brls. 40 cs.

Potash—
Antwerp, 5 cks.
Hamburg, 12 dms.
Rotterdam, 8

Red Lead—
Rotterdam, 26 cks.

Sodium Nitrate—
Rotterdam, 16 cks.

Sodium Prussiate—
Antwerp, 16 brls. 9 cks.

Starch—
Antwerp, 320 cs.
New York, 130 brls.
Rotterdam, 375 cs.
St. John, N.B., 6,700 bxs.

Stearine—
Antwerp, 13 cs.

Tartaric Acid—
Rotterdam, 30 cks.

Ultramarine—
Hamburg, 2 cks.

White Lead—
Antwerp, 7 cks.

Wood Pulp—
Christiania, 2,650 bls. Felber, Jucker, & Co.
Gothenburg, 102 bdls. "
" 1,313 bls. "
" 4,830
Halifax, N.S. 5,347
Rotterdam, 133 rolls
St. John, N.B., 834 bls.
Sarpsborg, 2,480 Kellner, Partington P. P. Co., Ld.
" 80 Christophersen, Andrews, & Co.

Zinc Oxide—
Antwerp, 40 brls.
New York, 500

Zinc Sulphate—
Rotterdam, 3 cks.

Zinc White—
Rotterdam, 45 cks.

HULL.

Week ending March 18th.

Acetic Acid—
Rotterdam, 9 blns. Hull & Netherlands S. S. Co.

Alizarine—
Rotterdam, 66 pks. Hull & Netherlands S. S. Co.
" 40 brls.

Barytes—
Antwerp, 44 cks. Bailey & Leetham, Ld.
" 101 H. F. Pudsey
" 15 Rattenbach & Schmitz
Bremen, 142 pks.

Borax—
Bremen, 20 cks. Reckitt & Sons
Chemicals *(otherwise undescribed)*
Amsterdam, 1 cs. Hull & Netherlands S. S. Co.
Hamburg, 27 cks. Wilson, Sons, & Co., Ld.
Rotterdam, 1 brl. Hull & Netherlands S. S. Co.
Coal Products—
Aniline
Rotterdam, 15 pks. Hull & Netherlands S. S. Co.
46 cs.
Pitch
Copenhagen, 100 brls. Wilson, Sons, & Co., Ld.
Colours—
Ghent, 7 brls. Wilson, Sons, & Co., Ld.
Hamburg, 8 pks. ,,
Rotterdam, 27 / 6 cks. / 8 brls. Hull & Netherlands S. S. Co.
Cream of Tartar—
Rotterdam, 2 cks. Hull & Netherlands S. S. Co.
Dyestuffs—
Extracts
Hamburg, 10 brls. Wilson, Sons, & Co., Ld.
Indigo
Rotterdam, 5 brls. Hull & Netherlands S. S. Co.
15 pks.
Valonia
Smyrna, 8 bgs. / 310 t.
Farina—
Hamburg, 100 bgs. Wilson, Sons, & Co., Ld.
Harlingen, 100 Hull & Netherlands S. S. Co.
Glucose—
Rotterdam, 60 bgs Hull & Netherlands S. S. Co.
Glue—
Hamburg, 32 bls. Wilson,
60 bgs. Sons, & Co., Ld.
Rotterdam, 17 Hull & Netherlands S. S. Co.
Rouen, 50 bls. Wilson, Sons, & Co., Ld.
Glue Stock—
Hamburg, 52 bls. Wilson, Sons, & Co., Ld.
Linseed Oil—
Amsterdam, 200 brls. Hull & Netherlands S. S. Co.
Litharge—
Rotterdam, 1 ck. Hull & Netherlands S. S. Co.
Lithopone—
Amsterdam, 20 cks. Hull & Netherlands S. S. Co.
Manganese—
Hamburg, 6 cks.
Manure—
Bergen, 990 bgs. Wilson, Sons, & Co., Ld.
Molasses—
N. Orleans, 300 brls.
Ochre—
Rouen, 12 cks.
Paint—
Amsterdam, 14 dms. Hull & Netherlands S. S. Co.
Phosphates—
Ghent, 1,902 bgs.
Potash—
Hamburg, 21 dms. Bailey & Leetham, Ld.
,, 10 cks.
Pyrites—
Drontheim, 150 t. Wilson, Sons, & Co., Ld.
Red Lead—
Rotterdam, 19 cks. Hull & Netherlands S. S. Co.
Saltpetre—
Hamburg, 66 cks. Wilson, Sons, & Co., Ld.
Soap—
Boston, 4 cs.
Soda—
Ghent, 350 bgs.
Sodium Nitrate—
Iquique, 12,223 bgs.
Starch—
Amsterdam, 30 bgs. Hull & Netherlands S. S. Co.
6 cs.
Antwerp, 20 Bailey & Leetham, Ld.
Bremen, 1,764 Veltmann & Co.
Ghent, 263 Wilson, Sons, & Co., Ld.
Tartaric Acid—
Rotterdam, 8 cks. Hull & Netherlands S. S. Co.
Turpentine—
Libau, 2 brls.
Ultramarine—
Bremen, 3 cks. Veltmann & Co.
Rotterdam, 27 Hull & Netherlands S. S. Co.
Waste Salt—
Hamburg, 95 bgs. Bailey & Leetham, Ld.
,, 1,200
White Lead—
Amsterdam, 41 cks. Hull & Netherlands S. S. Co.
Antwerp, 22 Bailey & Leetham, Ld.
Rotterdam, 44 Hull & Netherlands S. S. Co.
Wood Pulp—
Christiania, 2,233 pks. Wilson, Sons, & Co., Ld.
Drontheim, 600 bls. ,,
Gothenburg, 923 pks. ,,
,, 55
Hamburg, 80 ,,
Hango, 225 bls. J. Good & Sons
,, 134

GLASGOW.

Week ending March 23rd.

Barytes—
Antwerp, 36 cks.
Bleaching Powder—
Rotterdam, 23 cks. J. Rankine & Son
Boracic Acid—
Leghorn, 8 brls.
Borax—
Hamburg, 10 cks.
Castor Oil—
Marseilles, 183 cks.
Antwerp, 27
Leghorn, 25 cs.
Caustic Potash—
Rouen, 20 dms.
Chemicals *(otherwise undescribed)*
Amsterdam, 1 cs
Coal Products—
Alizarine
Rotterdam, 52 brls. J. Rankine
1 bx. & Son
Colours—
Rotterdam, 6 bxs. J. Rankine
188 pks. 10 brls. & Son
Cream of Tartar—
Marseilles, 2 cks.
Barcelona, 23
Tarragona, 5
Dyestuffs—
Extract
Rouen, 6 cks.
Genoa, 20 brls.
French Chalk—
Leghorn, 5 cs.
Glucose—
St. John, N.B., 100 brls.
Glue—
Rouen, 36 cks.
Antwerp, 10
Kainit—
Hamburg, 100 t
Lithopone—
Hamburg, 4 cks.
Ochre—
Rouen, 36 cks.
Painters' Colours—
Antwerp, 1 cs.
Genoa, 3 brls.
Potash—
Hamburg, 20 cks. 53 dms.
Potassium Carbonate—
Hamburg, 19 cks.
Red Lead—
Rotterdam, 6 cks. J. Rankine & Son
Rosin—
Rotterdam, 6 cks. J. Rankine & Son
Saltpetre—
Hamburg, 27 cks.
Soap—
Marseilles, 20 cks. 30 dms.
Rouen, 54 cs.
Hamburg, 1
Starch—
St. John, N.B., 4,125 bgs.
Tartar Emetic—
Hamburg, 6 cks.
Varnish—
Antwerp, 1 crt. 1 cs.
Waste Salt—
Hamburg, 200 bgs.
White Lead—
Rotterdam, 30 cks. J. Rankine
70 pks. & Son
Antwerp, 5 cks.
Wood Pulp—
Christiania, 120 bls.
St John, N.B., 360
Zinc White—
Rotterdam, 25 cks. J. Rankine & Son

TYNE.

Week ending March 18th.

Antimony Ore—
Hamburg, 100 cs. Tyne S. S. Co.
Barytes—
Rotterdam, 46 cks. Tyne S. S. Co.
Coal Products—
Pitch
Hamburg, 50 cks. Tyne S. S. Co.
Colours—
Rotterdam, 4 brls. Tyne S. S. Co.
Salt—
Hamburg, 150 t. Blaydon Manure & Alkali Co.
Starch—
Rotterdam, 74 cs. Tyne S. S. Co.
Tartaric Acid—
Rotterdam, 20 cks. Tyne S. S. Co.
Ultramarine—
Hamburg, 4 cks. Tyne S. S. Co.
Wood Pulp—
Christiania, 308 bls.
Gothenburg, 122 pks.
Zinc Oxide—
Antwerp, 20 cks. Tyne S. S. Co.

GOOLE.

Week ending March 15th.

Anthracene—
Boulogne, 1 ck.
Antimony Sulphide—
Boulogne, 5 cks.
Barytes—
Antwerp, 166 bgs.
Caoutchouc—
Boulogne, 8 cks. 2 cs.
Chalk—
Hamburg, 16 cs.
Chemicals *(otherwise undescribed)*
Hamburg, 1 ck. 2 cs.
Coal Products—
Alizarine
Rotterdam, 29 cks.
Colours—
Hamburg, 28 cks. 10 cs.
Copper Pyrites—
Huelva, 293 t.
Seville, 450
Dyestuffs *(otherwise undes.)—*
Amsterdam, 1 ck. 2 cs.
Antwerp, 1
Boulogne, 132 1
Rotterdam, 371 73 1 pk.
Dyestuffs—
Extracts
Hamburg, 220 bgs.
Logwood
Belize, 760 t.
Tannin Extract
Amsterdam, 10 cks.
Farina—
Delfszyhl, 675 bgs.
Hamburg, 250
Glue—
Boulogne, 1 ck. 3 bs.
Ghent, 2 cs.
Rotterdam, 40 bgs.
Lead Acetate—
Hamburg, 16 cks.
Ochre—
Dunkirk, 20 cks.
Phosphates—
Ghent, 808 bgs.
Potash—
Calais, 34 dms.
Dunkirk, 34
Potassium Sulphate—
Rotterdam, 8 cks.
Pyrites—
Huelva, 300 t.
Quebracha Extract—
Antwerp, 200 cks.
Quebracha Wood—
Colastine, 1,000 t.
Saltpetre—
Hamburg, 10 kgs. / 12 brls.
Rotterdam, 200 bgs.
Waste Salt—
Hamburg, 160 cks. / 300 t.

GRIMSBY.

Week ending March 18th.

Caoutchouc—
Antwerp, 5 cs.
Hamburg, 15
Rotterdam, 1
Chemicals *(otherwise undescribed)*
Antwerp, 40 bgs. / 1 ck.
Hamburg, 24
Colours—
Antwerp, 1 ck. 1 cs. 127 pks
Hamburg, 19 122
Rotterdam, 13 17
Dyestuffs—
Indigo
Rotterdam, 32 cs.

EXPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending March 22nd.

Acids—
Madras, 10 cs. £21
Sydney, 4 13
Trinidad, 2 pks. 10
E. London, 30 23
Alkali—
E. London, 15 c. £7
Rotterdam, 5 t. 7 30
Bombay, 3 8
Ammonium Carbonate—
Hamburg, 4 cks. £27
Sydney, 25 cs. 23
Ammonium Muriate—
Melbourne, 2 t. £36
Auckland, 1 18
Ammonium Sulphate—
Barbadoes, 100 t. £1,050
Antwerp, 100 1,050
Valencia, 80 840
Dunkirk, 130 1 c. 1,398
Las Palmas, 2 12 30
Ostend, 180 1,883
Martinique, 129 19 1,323
Ghent, 80 838
Demerara, 20 210
Mauritius, 50 7 511
Bremen, 50 53
Hamburg, 50 30

Arsenic—
Yokohama, 1 t. £20
Borax—
Rotterdam, 50 cks. £75
Madras, 5 c. 10
Carbon Bisulphide—
Wellington, 18 dms. £12
Carbonic Acid Gas—
Channel Is., 80 tubes £30
Caustic Soda—
Wellington, 14 c. £12
Melbourne, 1 t. 1 22
Brisbane, 14 15
Sydney, 2 11 22
Chemicals (*otherwise undescribed*)
Singapore, 3 cs. £22
Hong Kong, 1 11
Madras, 20 kgs. 19 pks. 75
M. Video, 3 45
Shanghai, 8 36
Melbourne, 21 46
Paris, 37 57
Karachi, 6 54
Rotterdam, 10 58
E. London, 80 9 73
Cape Town, 6 6 / 15 cks. 132
Perth, 15 120
Bombay, 17 26 166
Gothenburg, 8 92
Genoa, 12 / 20 kgs. 239
Auckland, 5 (pt.) 12
Wellington, 9 (pt.) 25
Sydney, 11 pks. 26
Durban, 8 cs. 10 dms. 57
Hamburg, 15 90
Pt. Elizabeth, 11 530 121
Chloride Lime—
E. London, 1 t. 1 c. £7
Citric Acid—
Hamburg, 10 c. £60
Wellington, 1 9
Amsterdam, 15 95
Rangoon, 2 cs. 17
Beira, 4 14
Calcutta. 1 7
New York, 1 t. 5 c. 143
Adelaide 5 35
Reval 10 60
Oporto, 5 pks. 21
Coal Products—
Alizarine
Boston, 33 cks. £403
Aniline
Melbourne, 2 cs. 2 pks. £89
Anthracene
Rotterdam, 57 cks. £128
Cologne, 264 1,250
Carbolic Acid
Brisbane, 30 dms. £7
Philadelphia, 4 pks. 84
Coal Tar Dyes
Boston, 7 cks. £81
Boulogne, 15 2 pks. 169
Fremantle, 1 cs. 12
Wellington, 16 312
Creosote
St. Malo, 27,600 galls. £213
Bayonne, 79,678 411
Gasoline
Durban, 30 dms. £24
Naphtha
Boulogne, 30 cks. £46
Naphthaline
Hamburg, 27 cks. £41
Calcutta, 17 15
Pitch
Rangoon, 15 pks. £6
Melbourne, 1 cs. 7
Haiphong, 1,070 cks. 545
Sulina, 18 brls. —
Antwerp 1,073 t. 1,106
Aviles, 1,350 1,754
Alexandria, 700 86
Hochfeld, 185 204
Tar
Gothenburg, 6 brls. £7
Sulina, 30 rnlts. —
E. London, 315 dms. 20
Newcastle, 7 13
Copper Sulphate—
Bordeaux, 102 t. £2,491
Paris, 69 8 c. 1,662
Alexandria, 1 2 25
Cream of Tartar—
Wellington, 5 c. £19
Wanganui, 10 41
Auckland, 16 70
Calcutta, 4 cs. 7
Melbourne, 50 kgs. 194
Disinfectants—
Hamburg, 15 pks. £32
Mombassa, 40 cks. 60 dms. 29
Penang, 5 200 120
Calcutta. 100 22
Karachi, 123 pks. 74
Durban, 20 209 95
Pt. Elizabeth, 20 10
Bombay, 50 44
Madras, 31 60
Fluoric Acid—
Melbourne, 4 cs. £10
Glycerine—
New York. 16 t. 7 c. £440
Manure—
Cape Town, 85 t. 6 c. £673
Las Palmas, 13 1 26
Auckland, 25 79
Alexandria, 5 41
Rouen, 76 240
Martinique, 191 17 1,575
Guernsey, 3 16
Guadeloupe, 10 10 300
Bordeaux. 23 10 125
Nitric Acid—
Townsville, 15 c. £13
Channel Is., 49 crbys. 77
Oxalic Acid—
Madras, 10 c. £16
Newcastle, 1 t. 10 44
Phosphorus—
Las Palmas, 1 cs. £10
Potash—
Sydney, 2 t. 15 c. £56
Potassium Carbonate—
Philadelphia, 2 t. 7 c. £61
Potassium Chlorate—
Newcastle, 2 c. £4
B. Ayres, 1 t. 40
Piræus, 7 11
Potassium Cyanide—
Melbourne, 5 t. £525
Perth, 3 360
Normanton, 1 112
Pt. Darwin, 1 5 c. 96
Townsville, 3 348
Auckland, 7 702
Fremantle, 8 8 605
Delagoa Bay, 18 1,903
Cartagena, 4 cs 44
Vera Cruz, 40 411
Sal-ammoniac
Shanghai, 36 kgs. £32
Piræus, 6 c. 9
Salt Cake—
Brussels, 150 t. £263
Antwerp, 140 245
Saltpetre—
Wellington, 12 c. £13
Syra, 2 t. 15 55
Brisbane, 10 10
M. Video, 1 13 35
Carterbury. 10 10
St. Michael's, 1 7 24
Martinique, 70 1 1,121
Barbadoes, 5 4 84
Sheep Dip—
Punta Arenas, 15 t. 8 c. £430
London, 16 9
Pt. Elizabeth, 50 dms. 9
E. London, 250 cs. 313
Durban, 250 313
B. Ayres, 750 1,628
Soap—
Hamburg, 15 t. 9 c. £341
Soda—
Shanghai, 2 t. 2 c. £8
Madras, 6 9
Bombay, 1 7
Delagoa Bay, 3 7
Sodium Bicarbonate—
Montreal, 1 c. £5
Normanton, 1 t. 6
Rangoon, 2 5
Sodium Hyposulphite—
Newcastle, 1 t. £7
Fremantle, 1 2 c. 6
Sulphur—
Trinidad, 15 c. £6
Pt. Elizabeth, 200 kgs. 87
Lisbon, 100 brls. 69
Sulphuric Acid—
Colombo, 15 cs. £25
Rangoon, 20 19
E. London, 1 t. 10 c. 13
Madras, 18 20
Superphosphates—
Cherbourg, 275 t. £825
Tartaric Acid—
Wellington, 3 c. £21
Auckland, 10 56
Beira, 2 cs. 6

LIVERPOOL.
Week ending March 22nd.

Acetic Acid—
Copenhagen, 5 t. £100
Alum—
Demerara, 6 c. 1 q. £2
Lisbon, 6 t. 1 2 30
Piræus 7 8 35
Yarmouth, N.S., 16 2 5
Odessa, 26 17 135
Bourgas, 2 19 1 14
St. John, N.B., 3 14 3 17
Rangoon, 3 17
Melbourne, 2 10
Sydney, 2 10
Ammonia—
Piræus, 11 c. £33
Ammonium Carbonate—
Hamburg, 15 c. £22
Ammonium Muriate—
Philadelphia, 16 t 5 c. 2 q. £301
Odessa, 3 53
Bilbao 3 12 60
Ammonium Sulphate—
Nantes, 25 t. £250
Gd Canary, 10 107
Valencia, 90 9 c. 904
Huelva, 5 1 50
Cullera, 151 15 1,520
Barbadoes, 51 555
San Francisco, 201 5 2,133
Demerara 215 18 2,3 6
Amorph. Phosph rus—
Hiogo. 5 cs. £53
Hong Kong, 6 63
Havana, 2 22
Rio de Janeiro, 6 7
Arsenic—
Natal, 1 t. £17
Basic Slag—
Granville, 400 t. £230
St. Nazaire. 105 10 c. 293
Bleaching Powder—
Alicante, 26 cks.
Ancona, 129 16 brls.
Bombay, 10 cs.
Boston, 577
Calcutta, 160
Christiania, 6
Genoa, 344
Ghent, 72
Hallein, 68
Lisbon, 18 15
Milwaukee, 70
Muncie, 68
Nantes, 38
Naples. 14
New York, 87
Oporto, 4 6
Philadelphia, 418
Pt Natal, 60 dms.
Rotterdam, 42
St. Jerome, 32
Seville 193
Spring Grove, 77
Tampico, 26
Boracic Acid—
Piræus, 3 c. £9
Victoria, B.C., 12 21
Borax—
Stettin, 14 cks. 2 t. 9 c. 3 q. £117
St. Catharin, 5 3 1 83
Hamburg, 1 13 2 27
Ghent, 1 14
Piræus, 11 17
Habana, 12 2 10
Vera Cruz. 2 4 3 35
Calcium Chloride—
Alexandria, 2 t. 2 c. £4
M. Video, 12 1
Rio de Janeiro, 2 9 5
Havre, 7 12 2 q. 17
Carbolic Acid—
Antwerp, 10 t. £209
Yokohama, 5 303
Hamburg, 3 3 c. 197
Dunkirk, 7 7 477
Vera Cruz, 19 13
Habana, 9 42
Rotterdam, 10 12 brls. 672
Castor Oil—
San Juan del Sur, 4 cs.
Caustic Potash—
Mannheim, 4 t. 13 c. £130
San Francisco, 1 11 40
B. Ayres, 1 1 1 q. 12
Caustic Soda—
Acajutla, 50 dms.
Alexandria, 75
Alicante, 40
Ancona, 51
Antwerp, 10
Bahia Blanca, 100
Barcelona, 300 252 pks. 10 cks.
Bari, 248
Batavia, 40
Bermuda, 65 68 12
Beyrout, 15
Bourgas, 19
Calcutta, 60
Carupano, 24
Chicago, 100
Cincinnati, 50
Curacao, 5
Fiume, 15
Genoa, 365
Ghent, 35
Hamburg, 15 5
Havana, 100
Hiogo. 665
Hong Hong, 143
Ibrail, 30
Jaffa, 30
Johannesburg, 9 cs.
Leghorn, 71
Lydenburg, 11
Malta, 11
Marseilles, 125
Melbourne, 27 pks.
M. Video, 25
Naples, 91
New York, 450
Odessa, 100
Oporto, 90
Paris, 35
Penang, 10
Pernambuco, 73
Philadelphia, 55 79 brls.
Puerto Cabello, 16
Pasages, 100
Rio de Janeiro, 52
Rosario,
Rotterdam, 71
Samarang, 34
San Francisco, 25
Santander, 70
Santiago, 22
Santos, 51
Seville, 396 108 kgs. 65
Sfax, 10
Shanghai, 142
Sourabaya, 40
Stettin, 35
Tampico, 292
Trieste, 15
Venice. 7
Vera Cruz, 100
Yokohama, 200
Chemicals (*otherwise undescribed*)
Calcutta, 20 t. 10 c. 3 q. £52
St. John, N.B., 2 2 9
Halifax, 10 22
Pasages, 2 1 34
Genoa, 3 11 2 54
Gothenburg, 2 16 50
Barcelona, 14 16 210
Tampico, 1 3 2 20
Fremantle, 1 5 17
Adelaide, 1 17
Brisbane, 1 17
Philadelphia, 23 11 674
Rotterdam, 10 17
China Clay —
Baltimore. 12,800 cks.
Barbadoes, 401
Bilbao. 300 bgs.
Bombay, 290
Boston, 458
Calcutta, 600
Georgetown, 100
New York, 769
Pernambuco, 60
Philadelphia, 154 228
Portland, M., 1,590
Coal Products—
Aniline Colour
New York, 14 cks. 5 kgs.
Montreal, 1
Aniline Dye
Cairo, 4 cs.
Lisbon, 2
Aniline Salt
Boston, 54 cs.
Philadelphia, 20
Piræus, 5 cks.
Naphtbaline
Antwerp, 303 bgs.
Philadelphia, 864
Naphthol
New York, 4 cks.
Pitch
Aviles, 100 t. 12 c.
Galatz, 7 15
Tar
Antwerp, 47 t. 17 c.
Opobo, 4 brls.
Copperas—
Syra, 6 t. 16 c. £13
Pernambuco, 1 2 q. 2

Copper Sulphate—

Bordeaux,	76 t.	10 c.		£1,462
B. Ayres,	15			326
Rosario,	10			217
La Pallice,	18	15		346
Bari,	44	6		797
Ancona,	58	1	1 q.	1,058
Venice,	54	14		987
Leghorn,	57	15	1	1,340
Lisbon,	145	9		3,031
Calcutta,	2			32
Galatz,	5			88
Algiers,	35	16		669
Phillippeville,	1			18
Bone,	2	3		38
Genoa,	85	7		1,627
Nantes,	9	14	1	225
Naples,	45	2	2	856
Cette,	41	19		913
Bermuda,	1			18
Oporto,	6	16	3	147
Piræus,	15	15	3	—
Zante,		14	2	—
Odessa,	15	19		281
Reval.	4	19		119

Disinfectants—

Calcutta,		7 c.		£14
Pt. Natal,	10 t.	12	3 q.	40

Dyestuffs—

Sumac Extract

New York,	50 cks.

Hydrochloric Acid—

San Juan,	1 t.	2 c.	1 q.	£15

Magnesia—

Genoa,	30 cs.
Havana,	5 cks.
New York,	10
San Juan,	1
Tampico,	2

Magnesium Sulphate—

Pernambuco,	40 bgs.
Portland, M.,	120 kgs.

Manure—

Demerara,	1 t.	2 c.	£18
New York,	6	5	97
Teneriffe,	11	19	3 q. 59
Kingston, Ja.,	20		134

Paint—

Bahia,	300 kgs.		
Calcutta,	100		
Cardenas,			2 cks.
Cienfuegos,			8
Colombo,			7
Demerara,		1 dm.	9
Gibraltar,			9 pks.
Gonaives,			2 cks.
Havana,			21
La Libertad,			4
Lisbon,	99		4 dms.
Manila,		63 cs.	
Matadi,	20		
Nauplia,	470		
New York,	50		14 pks.
Old Calabar,			2 dms.
Para,	80		
Rangoon,			20
Santiago de Cuba			5 cks.
Smyrna,	40		
Vera Cruz,			2
Yokohama	800		

Painters' Colours—

Bombay,			70 dms.
Boston,		7 brls	4 cks.
Gibraltar,	100 kgs.		
Havre,		3	
Kingston, Ja.,	1		
New York,			6 dms.
Para,	4	40	7 tcs.
Sagua la Grande,			8 cks.
San Francisco,	2 1		16
Shanghai,		80	

Paraffin Wax—

Bahia,	20 cs
Jaffa,	24
Larnaca,	12

Phosphorus—

Kobe,	10 c.	£82
Hiogo,	10 cs.	83
Shanghai,	32	325
Trinidad,	3	25

Picric Acid—

New York,	1 t.	18 c.	£190

Potassium Bicarbonate—

Piræus,		2 c.	£3
St. John,		5	4

Potassium Bichromate—

B. Ayres,	1 t.	2 c.	£42
Smyrna,	2	2	75

Potassium Chlorate—

Bari,	*2 t.*		*£60*
Havana,		*8 c.*	*13*
Hiogo,	6	5	200
Rio de Janeiro,	7	8	228
Shanghai,	8	15	288
Tampico,	1		30
Vera Cruz,	4	10	135

Salammoniac—

Boston,	2 t.	10 c.		£90
Galatz,	1	19		62
Karachi,	1	1		31
Palermo,		10		15
Philadelphia,	5	4	1 q.	172
San Francisco,	2	3	2	71

Salt—

Algoa Bay,	17 t.	15 c.	
Antwerp,	375		
Appam,	5		
Barbadoes,	41	14	
Boston,	100		
B. Ayres,	88	15	
Calcutta,	993	15	
Cameroons,	118	3	
C. C. Castle,	25		
Cape Town,	357		
Chama	6	5	
Christiania,	400		
Conakry,	29	18	
Delagoa Bay,	25		
Demerara,	205	16	
Ghent,	100		
Gd. Bassa,	4	9	
Gd. Bassam,	67	3	
Guatanamo,	31	17	
Hamburg,	104	18	
Havana,	50	50 cs.	
Lagos,	72	6 c.	
Lahra,	11	3	
Landana,	7	10	
Manacs,	16	10	
Matadi,	30		
Melbourne,	170		
N. Orleans,	265		
New York,	65		
Old Calabar,	100		
Para,	300		
Philadelphia,	200		
Portland, Me.,	53	3	
Pt. Natal,	37	10	
Rangoon,	707		
Rio Del Rey,	17	6	
Salt Pond,	119	15	
San Francisco,	350	18	
Sierra Leone,	100		
Sulymah,	30	2	
Winnebah,	17	10	

Salt Cake—

Antwerp,	120 t.		£155
Leghorn,	75		147
Lisbon,	42	3 c.	70
Philadelphia,	101	4	166

Saltpetre—

Havana,		9 c.	3 q.	£11
Para,	1 t.	5		98
Pernambuco,	5			128
San Francisco,	8	6	1	179
Yarmouth N.S.,		6		8

Sheep Dip—

B. Ayres,	10 cks.	200 dms.
Calcutta,		320
Cape Town,	100 kgs.	
M. Video,		528
Pt. Elizabeth,	1 t. 7 c.	
San Francisco,	200 cs.	

Soap—

Alcenous,	1,000 cs.		
Algoa Bay,	500 bxs.	1	
Alexandria,	50	31	
Antwerp,	35		
Barbadoes,	625	7	
Bata,	25		
Batanga,	33		
Bayin,	200		
Bombay,	445	35	
Boston,			30 pks.
Brussels,		2,050	
Calcutta,			750 bdls.
C. C. Castle,	50		
Cape Town,		85	
Chama,	150		
Conakry,	50		
Curacao,	44		
Delagoa Bay,	1,225	35	5
Demerara,	3 874		
Dominica,	73		
Durban,	300		
E. London,	2,790		
Genoa	130		
Gibraltar,	435	1	
Grenada,	126		
Greytown,	250		
Half Jack,	50		
Hamburg,	67		
Iloilo,		100	
Johannesburg,		125	
Karachi,	2 203	35	
Lagos,	881		
Las Palmas,	161		
Lima,		1	
Limon,	21		
Lisbon,	38 firks.		38 pks.
Loango,	50 bxs.		
Macassar,	500		
Madras,	32	22	
Manaos,	550		
Manila,		2	
Matadi,	100		
Mexico City,			1 ck.
Montego Bay,	550		
Montreal,		500	
Mossel Bay,		20	
New York,		49	
Old Calabar,	2,986		
Olten,		20	
Para,	100		
Pt. Natal,		100	
Pretoria,	226		1 bdle.
Rangoon,		58	
Rio Del Rey,	220		
Rotterdam,			50 dms.
St. John's, N'fld.	16	1	
St. Lucia,	100		
San Juan,	25		
San Juan del Sur,	140		
Shanghai,	7,500		
Sierra Leone,	205		
Singapore,	500		
Stamboul,		20	
Surinham,	165		
Sydney,		200	16 cks.
Teneriffe,	100		
Transvaal,	95		4 bdls.
Trinidad,	1,800		
Victoria, B. C.,		1,538	
Zanzibar,	100		250

Soap Lyes—

New York,	17 dms.
San Francisco,	24

Soda—

Hiogo,		20 cks.
Kobe,	100 kgs.	

Soda Ash—

Aalborg,	100 bgs.		
Antwerp,	550		
Barcelona,			30 cks.
Boston,		26 tcs.	36
Brisbane,			114
Calcutta,		80 brls.	
	200 kgs		6
Callao,			20
Delftshaven,	1,534 bgs.		
Genoa,	600		
Ghent,	1,135		
Gothenburg,	100		
Hamburg,			65
Hiogo,			410
Horsens,	50		
Jaffa,		10	
Kingsey,	100		
Kobe,			292
Leghorn,	60		
Lisbon,			29
New Toronto,	104		
New York,	4,092		86
Oporto,			24
Philadelphia,	3,712		
Piræus,		50	
Puerto Cabello,			20
Reinosa,			15
Rio de Janeiro,		170	50
Samarang,			30
San Francisco,			20
Santander,			4
Santos,			20
Smyrna,	250		
Sourabaya,			50
Sydney,		30	
Valparaiso,		5	
Venice,			177

Soda Crystals—

Alexandria,		300 brls.	
Bahia,			10 cks.
Boston,		56	
B. Ayres,	100 kgs.		
Calcutta,	58		
Oporto,		12	
Palermo,		12	
Philadelphia,			140
Pt. Natal,	15		50
Rotterdam,			20
St. John, N.B.,		109	115 pks.
St. John's, N'fd.,	30		
Trinidad,			34 cks.

Sodium Bicarbonate—

Alexandria,	50 kgs.	
Antwerp,	144	11 cks.
Batavia,	10	
Bombay,	26	4
Bordeaux,	140	
Boston,		50
Hiogo,	24	
Lisbon,	40	
Marseilles,	15	
Odessa,	510	350 dms.
Reval,	150	
Rodosto,	10	
St. John, N.B.,		100
St. John's, N'd.,	15	
San Luis Potosi,	20	
Seville,	67	3 brls. 2 cks.
Singapore,		40
Sydney,	234	11
Toronto,		1
Truro,	210	
Victoria, B. C.,	50	

Sodium Carbonate—

New York,	70 brls.

Sodium Chlorate—

Hamburg,	100 kgs.
New York,	200

Sodium Hyposulphite—

Lisbon,	21 cks.

Sodium (Metal)—

Hamburg,	4 t.	£431

Sodium Silicate—

Nantes,	15 dms.
Santander,	10 brls.

Stearine—

San Jose de Guatemala,	50 bgs.

Sulphur—

Boston,	325 t.	7 c.		£1,402
Chatham, N.B.,	50	2		214
Demerara,	3		3 q.	19
Lisbon,	3			18
New York,	2			12
Portland, Me.,	50	2		214
Samarang,	12	2		70
St. John, N.B.,	5	2		29

Sulphuric Acid—

Para,	9 c.	£7

Superphosphates—

Alicante,	50 t.		£142
Cullera,	218	2 c.	533
Cape Town,	8	18	54
Demerara,		5	1
Gd. Canary,	23	10	72
Oporto,	3	10	9
Valencia,	300		714

Varnish—

Boston,		15 pks.
Genoa,	6 cks.	
Havana,		2 cs.
Lisbon,	2	
Naples,		3
Seville		1
Teneriffe,		24 dms.
Vera Cruz,		4

Venetian Red—

Oporto,	40 brls.
San Francisco,	10 cks.

White Lead—

Johannesburg,	40 kgs.

Zinc Chloride—

Bombay,	2 t. 10 c.	£30

Zinc White—

St. John, N.B.,	52 cks.

MANCHESTER.

Week ending March 22nd.

Chemicals *(otherwise undescribed)*

Basle,	5 kgs. 5 cs.
Germany,	9 cks.
Ludwigshafen,	70
Zurich,	4 kgs.
	3 cks.

Coal Products—

Aniline Colours

Germany,	4 cks.

Aniline Salt

Germany,	12 cks.

Carbolic Acid

France,	102 btls. 1 cs.
Germany,	24 cks.

Pitch

Belgium,	257 t.	12 c.
Cette,	1,000	

Toluol

Germany,	20 dms.

Colours—

Germany,	2 cks.

Copperas—

Akway,	60 brls.
Bussorah,	200

Dyestuffs *(otherwise undescribed)*

Sultanabad,	39 cs.

Glue—

Germany,	10 cks.
Holland,	12

Linseed Oil—

Bussorah,	10 brls.

Naphylamine—
Germany, 56 cks.
Paint—
Akway, 9 cks.
Paraffin Wax—
Amsterdam, 10 cs.
France, 5 bls.
Salammoniac—
Bushire, 5 brls.
Salt—
St. John, N.B.. 800 t.
Sodium Arseniate—
Bombay, 3 cks.
Sodium Naphthionate—
Germany, 7 cks.
Switzerland, 17
Starch—
France, 20 bgs.
Tannin Extracts—
France, 8 cks.

HULL.

Week ending March 18th.

Ammonium Sulphate—

Bordeaux,	100 bgs.		
Rotterdam,	477		
Stettin,	550		

Antimony—
New York, 8 cks.
Bleaching Powder—

Boston,	131 cks.		
Stettin,	37		

Chemicals (*otherwise undescribed*)

Amsterdam,	38 cks.		50 btls.
Antwerp,	4		
Copenhagen,	27	35 cs.	30 pks.
Gothenburg,		6	
Hamburg,	23	19	
Konigsberg,	16		
New York,	147	10	
Novorossisk,			12
Odessa,	180		
Reval,		1	
Riga,	25		
Rotterdam,		106	
Stettin,	26		5
Stockholm,		2	

Coal Products—
Naphtha
Copenhagen, 13 cks.
Cottonseed Oil—

Amsterdam,	103 t.	1 c.
Antwerp,	61	15
Bordeaux,		17
Bremen,	5	4
Christiania,	1	15
Dunkirk,	22	10
Gothenburg,	4	
Hamburg,	22	5
Rotterdam,	38	14
Rouen,	12	11
Stavanger,	4	6
Stockholm,	17	7

Dyestuffs (*otherwise undescribed*)

Bergen,		3 cs.
Drontheim,		2
Hamburg,	1 ck.	
Riga,	281 bgs	

Glue—
New York, 62 cks.
Linseed Oil—

Amsterdam,	1 t.	16 c.
Christiania,	10	7
Christiansand,	2	14
Constantinople,	1	16
Drontheim,	2	13
Gothenburg,		7
Hamburg,	35	12
Stavanger,		4

Manure—

Dunkirk,	2,194 bgs.
Stettin,	12 bls.

Painters' Colours—

Amsterdam,	7 cks.		16 dms.
Antwerp,	106	6 cs.	
Bergen,	148	2	
Bremen,	92	23	269
Christiania,			84 pks.
			2 dms.
Christiansand,	1		4
Copenhagen,		2	
Dunkirk,			1
Ghent,	9	2	177
Hamburg,	20	2	774 pks.
New York,	190		
Odessa,	290		
Reval,		1	
Rotterdam,		12	86
Rouen,	34		
Stettin,	4		
Stockholm,	1		

Pitch—

Antwerp,	318 t.	
Dunkirk,	220	

Soap—

Amsterdam,	35 cs.	
Copenhagen,	2	

Starch—
Stockholm, 1 cs.
Tallow—

Amsterdam,	14 cks.	
Gothenburg,	5	
Stockholm,	8	

Tar—

Amsterdam,	11 cks.	
Bergen,	3	
Copenhagen,	10	
Hamburg,	35	
Stettin,	10	

Varnish—

Amsterdam,	5 cks.		
Antwerp,	37	2 cs.	
Bergen,		1	
Bremen,		13	
Gothenburg,	1	2	
Hango,	8		
Reval,		1	
Stockholm,	1	15	2 dms.

GLASGOW.

Week ending March 23rd.

Ammonium Sulphate—

Barbadoes,	50 t.		
Barcelona,	20		
Berbice,	10	3 c.	2 q.
Cette,	608	7	2
Cullera,	328	16	1
Demerara,	310	7	2
Hamburg,	10	1	
Palermo,	9	17	1
Valencia,	851	13	1

Bleaching Powder—
Calcutta, 66 t. 18 c.
Boracic Acid—
Sydney, £67 15s.
Borax—

Antwerp,	£76	18s.
Delagoa Bay,	40	

Castor Oil—
Sydney, £68
Coal Products—
Carbolic Acid
Amsterdam, £201
Creosote Oil

Boston,	£60	
Bordeaux,	2,175	
Christiania,	15	
France,	175	

Pitch

Antwerp,	270 t.		
Bordeaux,		269	17s.
Calcutta,		41	15
Madras,		46	12

Tar

Algoa Bay,	£28	
Boston,	227	
Calcutta,	158	1cs.
Christiania,	18	
Danzig,	340	
Madras,	193	18
Riga,	74	9
Sicily,	4	

Tar Oil
Antwerp, £105
Copperas—
Calcutta, £28
Glycerine—
Bombay, £74 15s.
Guano—
Valencia, 122 t. 13 c. 3 q.
Gutta Percha—
Amsterdam, £20
Iodine—
Rotterdam, £224
Lead Acetate—
Bombay, £89
Linseed Oil—
Trinidad, 5 t. 9 c.
Litharge—
Johannesburg, 2 t. 4 c.
Rotterdam, £3
Logwood Extract—
N.S.W., £33 11s.
Magnesium Sulphate—
Paris, £48 11s.
Sydney, 22 10
Manganese—
Antwerp, £162
Manure—

Antwerp,	15 t.		
Cullera,	178	11 c.	2 q.
Trinidad,	35		
Valencia,	34	11	3

Paint—
Christiania, 10 c. 2 q.
Painters' Colours—

Bombay,	£30	
Boston,	213	
Calcutta,	64	
Cape Town,	43	14s.
Colombo,	38	10
Delagoa Bay,	20	10
Natal,	36	
Rotterdam,	47	
Sydney,	1,615	
Trinidad,	71	10

Paraffin Wax—

Barcelona,	£861	
Cape Town,	65	
Italy,	487	
Rotterdam,	115	
Rouen,	71	
Sicily,	77	
Valencia,	20	

Potassium Bicarbonate—

Bombay,	£29	
Barcelona,	431	
Genoa,	567	
Paris,	936	
Philadelphia,	390	
Rotterdam,	58	
Rouen,	179	

Potassium Bichromate—
Antwerp, £119
Potassium Prussiate—

Barcelona,	£241	18s.
Calcutta,	37	
New York,	125	

Soap—

Algoa Bay,	2 t.	11 c.	
Demerara,	1	17	3 q.
Johannesburg,	6	5	
Trinidad,	3	15	

Sodium Bicarbonate—

Barcelona,	1 t.	15 c.
Philadelphia,	4	13
Rouen,	373	1

Sodium Nitrate—

Demerara,	10 t.	3 c.	3 q.

Sodium Sulphate—
Calcutta, 5 t. 14 c.
Sulphate of Lime—
Ootacamund, 1 t. 9 c. 3 q.
Sulphur—
Trinidad, 8 t. 9 c.
Sulphur Chloride—
Trinidad, 8 t. 9 c.
Superphosphates—
Barbadoes, 100 t.
Tallow—
Rotterdam, 8 t. 15 c.
Waste Salt—
Valencia, 65 t.
Zinc Ashes—
Rotterdam, £125

TYNE.

Week ending March 18th.

Alkali—

Amsterdam,	40 t.	14 c.
Hamburg,	14	14

Ammonium Sulphate—
Odense, 5 t.
Antimony—

Amsterdam,	7 t.
Barcelona,	3
Hamburg,	3
Rotterdam,	5

Arsenic—
Barcelona, 4 t. 13 c. 3 q.
Barium Binoxide—

Antwerp.	10 t.	15 c.	1 q.
Genoa.	3	13	3

Benzine—
Copenhagen, 15 c.
Bleaching Powder—

Aalborg,	3 t.	3 t.	3 c.
Amsterdam,	40	4	2
Copenhagen,	5	6	1
Drontheim,	9	11	3
Hamburg,	5	2	3
Rotterdam,	10	14	3
Carbolic Acid—			
Odense,		12 c.	1 q.
Caustic Soda—			
Barcelona,	47 t.	10 c.	
Copenhagen,	9	17	1 q.
Drontheim,	4	13	
Hamburg,	52	12	1
Litharge—			
Genoa,	1 t.	3 c.	1 q.
Hamburg,	1	5	2
Magnesia—			
Barcelona,	78 t.	17 c.	3 q.
Hamburg,	2	3	3
Manure—			
La Rochelle,	669 t.	6 c.	2 q.
Paint—			
Antwerp,	1 t.	5 c.	
Bergen,		5	3 q.
Copenhagen,	5	16	3
Hamburg,	1	16	
Painters' Colours—			
Rotterdam,		8 c.	
Red Lead—			
Barcelona,	3 t.	3 c.	1 q.
Copenhagen,	4	16	3
Genoa,	7	5	3
Hamburg,	13	18	1
Naples,	3	5	
Soda—			
Amsterdam,	40 t.	6 c.	
Rotterdam,	20		
Soda Ash—			
Antwerp,	5 t.	10 c.	2 q.
Copenhagen,	9	5	1
Sodium Sulphate—			
Trondhjem,	753 t.		
Superphosphates—			
Frederikshavn,	250 t.	9 c.	
White Lead—			
Copenhagen,	1 t.	9 c.	2 q.
Zinc Ashes—			
Rotterdam,	4 t.	18 c.	

GOOLE.

Week ending March 15th.

Chemicals (*otherwise undescribed*)

Antwerp,		1 dm.
Boulogne,	10 cks.	
Hamburg,		16

Coal Products (*otherwise undes.*)—

Antwerp,	1 ck.	1 cs.	20 dms.
Boulogne,	52	5	4 pks.
Ghent,	4		
Hamburg,	41		
Rotterdam,	84		

Coal Products—
Pitch

Antwerp,	785 t.	
Dunkirk,	111	

Dyestuffs (*otherwise unaescribed*)
Hamburg, 10 bgs.
Manure—
Dunkirk. 308 bgs.
Painters' Colours—

Antwerp,	1 ck.	2 cs.	
Boulogne,		4	2 pks.
Calais		1	
Hamburg,	2	38	
Rotterdam,		8	

GRIMSBY.

Week ending March 18th.

Alkali—
Hamburg, 18 cs.
Caoutchouc—
Esbjerg, 1 cs.
Malmo, 2 bs.
Chemicals (*otherwise undescribed*)
Malmo, 1 cs.
Coal Products (*otherwise undes.*)—
Dieppe, 3 kgs. 57 cks.
Hamburg, 4 bls.
Coal Products—
Pitch
Antwerp, 73 t.
Painters' Colours—
Antwerp, 2 cks. 1 pk.
Rotterdam, 1 kg.
Stearine—
Malmo, 25 trcs.
Tallow—
Dieppe, 1 ck.
Malmo, 285 trcs.

PRICES CURRENT.

WEDNESDAY, Mar. 29, 1899.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. *at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.*

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % per cwt.	5/9	&	8/3
,, Glacial ,,			35/-
Arsenic S.G. 2,000° ,,	1	4	0
Fluoric per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. per bottle	0	0	9
,, (Cylinder), 30° Tw. ,,	0	3	0
Nitric 80° Tw. per lb.	0	0	1½
Nitrous ,,	0	0	1½
Oxalic nett ,,	0	0	3
Phosphoric, 1750° ,,	0	0	11¾
Picric ,,	0	0	11½
Sulphuric (fuming 50 %) per ton	15	10	0
,, (monohydrate) ,,	5	10	0
,, (Pyrites, 168°) ,,	3	0	0
,, (,, 150°) ,,	1	5	0
,, (free from arsenic, 145°) ,,	1	7	6
Sulphurous (solution) S.G. 1025 ,,	3	0	0
Tannic (pure) per lb.	0	1	2½
Tartaric ,,	0	1	0
Arsenic, white powdered nett per ton	17	0	0
Alum, loose lump ,,	4	5	0
Alumina Sulphate (pure) ,,	3	15	0
Aluminoferric ,,	2	3	6
Aluminium (Ingot metal 98/99¾ %) nett ,,	148	0	0
Ammonia, Anhydrous per lb.	0	1	2
,, ·880 = 28° B. ,,	0	0	2¾
,, = 24° B. ,,	0	0	1¾
,, Carbonate nett ,,	0	0	3
,, Muriate per ton	19	10	0
,, ,, (sal-ammoniac) 1st & 2nd per cwt.	35/-	&	33/-
,, Nitrate per ton	33	0	0
,, Phosphate per lb.	0	0	4
,, Sulphate (grey) London per ton	11	0	0
,, ,, (grey) Hull ,,	11	0	0
Aniline Oil (pure) per lb.	0	0	4½
Aniline Salt ,, ,,	0	0	4
Antimony per ton	38	15	0
,, (tartar emetic) per lb.	0	0	6¾
,, (golden sulphide) ,,	0	0	9
Barium Chloride per ton	6	17	6
,, Carbonate (native) ,,	3	15	0
,, Sulphate (native levigated) ,,	42/6	to	65/-
Bleaching Powder, 35 % nett ,,	4	10	0
,, Liquor, 7 % ,,	3	10	0
Bisulphide of Carbon ,,	11	5	0
Chromium Acetate (crystal) per lb.	0	0	6¼
Calcium Chloride per ton	2	7	6
China Clay (at Runcorn) in bulk ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizatine (artificial) 20 % nett per lb.	0	0	6¾
Magenta ,,	0	3	9
Anthracene, 3' % A, f.o.b. London per unit per cwt.	0	0	4
Benzol, 90's per gallon	0	0	7½
,, 50/90 ,, ,,	0	0	8
Carbolic Acid (crude 60°) ,,	0	1	11½
,, (crystallised 40°) per lb.	0	0	6¾
,, (liquid 95/97%) per gallon	0	1	0
Creosote (ordinary) ,,	0	0	3½
,, (filtered for Lucigen light) ,,	0	0	4
Crude Naphtha 30% @ 120° C. ,,	0	0	4
Grease Oils, 22° Tw. per ton	3	0	0
Pitch, f.o.b. Liverpool or Garston ,,	1	3	0
Solvent Naphtha, 90% at 160° per gallon	0	1	1
Copper per ton	69	2	6
,, Sulphate ,,	24	0	0
,, Oxide (copper scales) ,,	55	0	0
Glycerine (crude) 80% ,,	24	0	0
,, (distilled S.G. 1250°) ,,	48	10	0
Iodine nett, per oz.	0	0	7½
Iron Sulphate (copperas) per ton	1	2	6
,, Sulphide (antimony slag) ,,	2	0	0
Lead (sheet) ,,	15	10	0
,, Litharge Flake (ex ship) ,,	16	0	0
,, Acetate (white ,,) ,,	26	0	0
,, ,, (brown ,,) ,,	18	0	0
,, Carbonate (white lead) pure ,,	18	10	0
,, *Nitrate* ,,	22	10	0

	£	s.	d.
Lime, Acetate (brown) (ex ship) per ton	5	0	0
,, ,, (grey) (ex ship) ,,	7	17	6
Magnesium (ribbon and wire) per oz.	0	2	3
,, Chloride (ex ship) per ton	3	10	0
,, Carbonate ,,	1	17	6
,, Calcined Magnesia ,,	9	10	0
,, Sulphate (Epsom Salts) ,,	2	12	6
Manganese, Sulphate ,,	15	10	0
,, Borate per cwt.	2	0	0
,, Ore, 70% per ton	3	10	0
Methylated Spirit, 61° O.P per gallon	0	2	0
Naphtha (Wood), Solvent ,,	0	3	0
,, ,, Miscible, 60° O.P. ,,	0	3	10
Oils:—			
Cotton-seed per ton	17	15	0
Linseed ,,	19	10	0
Stearine ,,	26	0	0
Phosphorus (Yellow) per lb.	0	1	11
,, (red) ,,	0	2	8
Potassium Bichromate nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) per ton	15	10	0
,, Chlorate per lb.	0	0	3½
,, Cyanide, 98 % ,,	0	1	1
,, Hydrate (Caustic Potash) 90 % per ton	22	0	0
,, ,, ,, 75/80 % ,,	17	15	0
,, Potash Hydrate Liquid 50 % ,,	10	15	0
,, Nitrate (refined) ,,	19	15	0
,, Permanganate per cwt.	2	12	6
,, Prussiate Yellow per lb.	0	0	7¼
,, Sulphate, 90 % (ex ship) per ton	9	15	0
,, Muriate, 80 % ,,	8	15	0
Silver (metal) per oz.	0	2	3 7/16
Sodium (metal) per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % ,, ,, (f.o.r. w'ks.)	4	5	0
,, ,, (Carb. Soda-ash) 48 % ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Alkali) 58 % (Bags) ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Soda Crystals) ,, ,, (f.o.r. w'ks.)	2	10	0
,, Acetate (ex-ship) ,,	12	10	0
,, Arseniate, 45 % ,,	13	5	0
,, Chlorate per lb.	0	0	3¼
,, Borate (Borax) nett per ton	16	0	0
,, Bichromate ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton (10 ton lots)	7	12	6
,, ,, (74 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	0	0
,, ,, (60 % Caustic Soda) ,, ,, ,, (10 ton lots)	6	0	0
,, ,, (pure liquor 90° Tw.) ,, ,, ,, (10 ton lots)	3	10	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate (cwt. kegs) ,,	6	15	0
,, Hyposulphite ,,	5	5	0
,, Manganate, 25 % ,,	16	0	0
,, Nitrate (95 %) ex-ship Liverpool per cwt.	0	8	6
,, Nitrite, 98 % per ton	26	0	0
,, Phosphate ,,	10	7	6
,, Prussiate per lb.	0	0	5¾
,, Silicate (glass) per ton	4	10	0
,, ,, (liquid, 100° Tw.) ,,	3	10	0
,, Stannate, 40 % per cwt.	3	10	0
,, Sulphate (Salt-cake) per ton	1	10	0
,, ,, (Glauber's Salts) ,,	1	15	0
,, Sulphide ,,	7	5	0
,, Sulphite ,,	4	15	0
Strontium Hydrate, 100 % ,,	10	15	0
Sulphocyanide Ammonium, 95 % per b.	0	0	5¾
,, Barium, 95 % ,,	0	0	4
,, Potassium ,,	0	0	6½
Sulphur (Flowers) per ton	7	0	0
,, (Roll Brimstone) ,,	6	0	0
,, Brimstone: Best quality ,,	4	12	6
Superphosphate of Lime (26 %) ,,	2	10	0
Tallow ,,	24	0	0
Tin Crystals per lb.	0	0	7½
,, English Ingots per ton	113	0	0
Zinc (Spelter) ,,	27	15	0
,, Chloride (solution, 100° Tw.) ,,	7	10	0
,, Sulphate, Crystal ,,	7	10	0

THE

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Advertisements intended for insertion in the current week's issue should reach the office by **Thursday morning** at the latest.

CURRENT TOPICS.

TWO VIEWS OF THE BACTERIAL PROCESS.

DURING the past week, two very interesting, and in some respects amusing, opinions upon the value of the bacterial sewage process have come within our ken.

In the first place, Mr. Dibdin has been enlightening the members of the Royal Institute of Public Health upon the budding advantages of his bacterial process, which is presumably fast bursting into the blossoms of promise in regard to the treatment of industrial sewage. Mr. Dibdin related how experiments had been initiated to see if the simple bacterial processes would be suitable in the case of the complex sewage of manufacturing communities, and he claimed that at Leeds and Blackburn these experiments had abundantly demonstrated the efficiency of the method.

As the result of this new method of sewage purification, says Mr. Dibdin, "chemical sewage works are dead. No new ones have been erected for a long time."

Well, no doubt the fact is true, more or less; but we are disposed to join issue regarding the cause. There is milk in a cocoanut, but it does not account for the hair outside.

It was a pity when citing the reported successes with industrial sewage at Leeds and Blackburn that Mr. Dibdin did not also refer to the experiments with this simple process at Bradford. Fortunately Prof. Ramsay has filled the gap, for when the Royal Sewage Commission visited Bradford, the "experiments with the bacteriological process suggested by Mr. W. J. Dibdin," and now being carried out, were inspected and explained, but it appears that Prof. Ramsay "gave little encouragement to the Commissioners to hope that the experiments would prove the methods to suit the Bradford sewage."

The presence of the wool fat from wool-scouring works seems to be the cause of the difficulty. We should have thought it would have made a nice pabulum for the microbic scavengers to thrive and multiply upon, but apparently the diet is too rich. We do know, however, that the difficulty is amenable to many of the chemical processes which Mr. Dibdin says are dead, and as there are a great number of places in Yorkshire where the same trouble has to be faced, we may possibly live to see a few more chemical systems installed. It is quite another matter whether we shall live long enough to see the blossoms of promise develop into the fruit of maturity in the purely bacterial treatment of industrial sewage.

A FATAL ETHER EXPLOSION.

It is a nice thing to define an accident. Literally it means a befalling, but by common consent and use it means an undesigned and unforeseen occurrence of an afflictive or unfortunate character. Legally it is such an interference as is out of the range of ordinary calculation. According to the first and second definitions the verdict of "accidental death" returned upon the nurse who lost her life through the break-

ing of an ether bottle in the surgery of the Rochdale Workhouse Infirmary is intelligible, but according to the third and last it is not.

Had there been a handle to the inside of the surgery door, or due precautions in force for the reception of dangerous liquids like ether, the mishap might have been wholly prevented, or at least hindered from proving fatal. We should like to have seen and heard the agitation and outcry that would have resulted if such laxity had been unearthed at a nitro-glycerine factory, a match factory, a white-lead works, colliery, or dye works; or if such a death-trap had been discovered in a chemical works of any kind.

All the medical officer had to say was that he understood the Guardians had decided to make alterations before the accident, and also that he thought ether ought not to be kept in large quantities in such bottles, but he did not know the three bottles of ether were in the cupboard.

There was a store in another part of the building to which the bottles ought to have been taken, but the system of receiving was faulty, the experience of Nurse Barker's deputy inadequate, and the surgery itself a veritable death-trap. In any factory the officials would have been subjected to severe censure, but in this case the jury contented themselves with the verdict we have previously mentioned, and a few mild and very obvious suggestions, and there the matter ends:—

> Thrice armed is he that hath his quarrel just,
> But armour-plated sixty-fold is he
> 'Gainst gross neglect or wanton breach of trust,
> Who on his name-plate can subscribe M.B.

MINING STATISTICS FOR 1898.

An advance proof has been issued from the Home Office of the tables relating to the output of coal and other minerals, and the number of persons employed at mines worked under the Coal and Metalliferous Mines Regulations Acts during the year 1898. It is pointed out that large quantities of several important minerals, such as iron ore, limestone, salt, sandstone, slate, clay, &c., are obtained from quarries under the Quarries Act, and from other open workings the returns from which are not yet available. The totals for coal and the ores of copper, lead, and zinc may, however, be regarded as substantially complete.

According to the table the output of coal was as follows:—England: Cheshire, 706,506 tons; Cumberland, 2,061,878; Derby, 13,573,754; Durham, 34,737,347; Gloucester, 1,587,789; Lancaster, 24,324,610; Leicester, 1,735,743; Monmouth, 6,059,509; Northumberland, 10,570,713; Nottingham, 7,77 ,047; Shropshire, 751,651; Somerset, 990,787; Stafford, 13,720,4:3; Warwick, 2,688,283; Westmoreland, 1,010; Worcester, 895,071; Yorkshire, 25,636,367; total for England, 147,811,478 Wales: Brecon, 317,085; Carmarthen, 1,123,898; Denbigh, 2,473,896; Flint, 725,500; Glamorgan, 19,140,742,; Pembroke, 82,384; total for Wales, 23,863,505 The total for Scotland is 30,237,295 tons, and for Ireland 129,965 tons, making a gross total of 202,042,243 tons, as against 202.119, 196 tons the previous year.

Other totals for the United Kingdom at mines under the Coal Mines Regulation Acts are as follow:—Clay and shale, other than fireclay and oil shale, 133,110 tons, last year, 122,403; fire-clay, 2,783,219 tons, last year, 2,682,472; iron pyrites, 9,524 tons, last year, 8,545; ironstone, 7,901,046 tons, last year, 7,793,168; limestone, 38,633 tons, last year, 40,171; oil shale, 2,137,999 tons, last year, 2,223,757; sand, 4,426 tons, last year, 3,249; sandstone (including ganister), 111,754 tons, last year, 152 064.

The numbers of persons returned as working at mines under the Coal Mines Regulation Acts are given as follows:—England: Cheshire, 2,538; Cumberland, 7,826; Derby, 42,928; Devon, 2; Durham, 105,104; Gloucester, 7,379; Kent, 150; Lancaster, 80,848; Leicester, 6,271; Lincoln, 216; Monmouth, 30,365; Northumberland, 35,002; Nottingham, 24.499; Shropshire, 3,851; Somerset, 5,215; Stafford, 42,243; Warwick, 8,616; Westmorland, 12; Worcester, 2,633; Yorkshire, 98,212; total for England, 503,910. Wales: Brecon, 1,316; Carmarthen, 4,628; Denbigh, 9,078; Flint, 2,455; Glamorgan, 91,946; Pembroke, 558; total for Wales, 109,981. The Scottish total is 92,022, and the Irish total 981, making a gross total of 706,894, compared with 695,213 in the previous year. Of these 567,124 are employed below ground and 139,770 above ground.

The total output of minerals at mines under the Metalliferous Mines Regulation Acts during 1898 is given as 3,813,812 tons (of which iron ore accounts for 2,167,100), compared with 3,783,916 tons in the previous year (when the tonnage of iron ore was 2,216,772). The total number of persons employed was 34,231, against 33,500 the previous year.

EXPORTS OF PETROLEUM FROM U.S.A.

The Chief of the Bureau of Statistics at Washington gives the following returns of the exports of petroleum and petroleum products for January. The total shipments were 62,385,776 gallons, compared with 85,412,917 gallons in 1898. The total for the 7 months ending January, 1899, was 559,227,491 gallons, against 617,984,401 gallons in the same period of 1898. The details of the shipments are as follows:—

			Gallons.
CRUDE PETROLEUM.			
Total,	January,	1899	7,467,713
,,	,,	1898	8,835,695
NAPHTHAS.			
Total,	January,	1899	1,482,331
,,	,,	1898	1,070,538
ILLUMINATING.			
Total,	January,	1899	45,796,292
,,	,,	1898	67,074,120
LUBRICATING AND PARAFFIN.			
Total,	January,	1899	4,698,306
,,	,,	1898	5,304,614
RESIDUUM.			
Total,	January,	1899	2,941,134
,,	,,	1898	3,127,950

"THE BURNING QUESTION OF THE HOUR."

At the last meeting of the Liverpool Section of the Society of Chemical Industry, a member of the section read an amusing communication having reference to "the great coal economiser" "Kolawitch." He said:—"In these days of advancing prices of fuel you will be grateful to me for calling your attention to a wonderful preparation introduced by the 'Kolawitch' Company, Limited, with manufactory at Nottingham and depot at 20, New Oxford-street, London. Here are also two circulars describing the merits of this wonderful compound, which these public benefactors have been distributing broadcast.

"Before proceeding to take advantage of the properties of this wonderful preparation I would remind would-be users of the provisions of the Alkali Acts, limiting hydrochloric acid gas in the chimney to one-fifth of a grain per cubic foot, as Kolawitch is simply common salt coloured with a little ultramarine.

"It is a pity that the Kolawitch Company, Ltd., have acquired the sole right of manufacture and sale of this preparation, as some of us are interested in the salt industry, and the enhanced price obtained for common salt by the Kolawitch Company is calculated to excite somewhat curious feelings in holders of Salt Union shares."

We would refer our readers to page 90 of our issue of February 7th, 1891, where will be found an article on a similar subject to the foregoing and headed "A Paying Business." Woe betide our buildings and suburban parks if ever common salt becomes universally applied as either "smoke consumer" or "coal economiser."

Insanitary Manufacture of Ice cream.—At Liverpool last week, Selvente Andrew appeared to a summons at the instance of the Health Department of the Corporation, the charge against him being that of having manufactured and stored ice-cream under insanitary conditions. Inspector S. Webster described the ice-cream as being made at 17, Bolton Street, in a dirty scullery adjoining a stable door, and only three feet distant from a horse midden and a filthy closet. Some of the ice, it was also stated, lay on the stable floor. The Stipendiary, remarking that the best thing to do would be to feed him for a fortnight on his own ice-cream, fined him 40s. and costs.

Dismantling of Forest of Dean Ironworks.—The mortgagees in possession of Loudley Ironworks, near Cinderford, have resolved to sell the furnaces. These works comprised two iron furnaces of modern construction, but they have not been working for some time past. On the works becoming the property of a company, iron trade depression set in, and although for some time the works were carried on by the use of Spanish ore, the railway charges eventually killed this project. The situation is very depressing, because there are immense fields of ore yet untouched. The trade was in the height of prosperity in 1873, when nearly 200,000 tons of ore were obtained, but at the present day the output is only about 20,000.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Peat Briquettes. H. Kerrinnes. 5,974. March 20.

Filter Press Plates. I. Kohn. 6,037. March 20.

Roasting Sulphide Ores and Producing Gases for the Manufacture of Sulphuric Acid. A. W. Tangye. 6,042. March 20.

Water Filters. S. M. Boyer. 6,057. March 20.

Apparatus for Recovering and Purifying Oil. H. H. Lake. 6,069. March 20.

Recovering Manganese and Phosphorus from Converter Gases. F. W. Golby. 6,139. March 21.

Purification of Waste Liquors from Distilling, Brewing, etc. W. Naylor. 6,272. March 23.

Improved Apparatus for Extracting or Reducing Metals by Electrolysis. H. Bumb. 6,297. March 23.

Improvements in Artificial Stone. F. Gehre. 6,311. March 23.

Purifying Waste Distillery Liquors and Extracting Valuable Products. W. S. Squire. 6,387. March 24.

Metallic Hampers. A. J. Wilcox. 6,403. March 24.

An Improved Ammonia Soap. W. H. Murray. 6,468. March 25.

Improvements in the Manufacture of Gunpowder. C. H. Curtis, C. L. W. Smith, D. J. Metcalfe, A. C. Pearcy, and A. F. Hargreaves. 6,523. March 25.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in or Relating to the Extraction of Oil from Material containing it. J. C. W. Stanley and The Fish-oil and Guano Syndicate, Ltd., both of 16, St. Helens Place, London. Eng. Pat. 6,334. March 15, 1898.

The extraction tanks are arranged in duplicate so as to ensure continuous working, each tank being alternately charged and emptied. The two tanks are canted so that the solid contents gravitate towards a central worm conveyor. Steam and water are introduced through concentric pipes, which reach nearly to the bottom of the tanks, the steam pipes ending a little short of the water pipes, so that the latter is heated before being discharged. A little below the working level a perforated plate or grid is fixed across the tank, so as to keep down the solid matters, but allow the hot water (with the extracted oil on its surface) to rise and reach the overflow exits. In this way the oil in the fish offal, etc., is extracted and carried upwards until it reaches the outlets in the sides of the tanks, and passes into the gutters provided for its reception. There are two figures.

Improvements in Packing Caustic Alkalies. H. Precht, Neu Stassfurt, near Stassfurt, Prussia. Eng. Pat. 12,075. May 27, 1898.

In order to enable caustic alkalies to be packed in wooden casks, they are cast into blocks of convenient size and shape, and surrounded with material which does not attack the wood or deteriorate the caustic. For these purposes, carbonate, bicarbonate, or silicate of potash or soda is recommended. The thickness of the envelope depends upon circumstances. Thus the iron drums at present used can be dispensed with, while the barrels can afterwards be used for other purposes. Coating the barrels with a mixture of gypsum, rye-flour, and resin has been tried, and proved a failure.

Improvements in or Relating to the Manufacture of Salt. T. C. Lowden, 7, South Hill Park, Hampstead. Eng. Pat. 9,904. April 29, 1898.

Salt evaporating pans are arranged so as to be heated by the waste gases from gas retorts or gas producers. The two drawings are confined to the illustration of the gas producer system. A small movable tank is fixed on the top of the producer to utilise radiated heat. This connects with a larger tank, which is heated by the gases leaving the producer. The producer gas is then freed from ammonia and like bye-products, and burnt under additional concentrating pans.

An Improved Method of Fixing Tannate of Titanium on Vegetable Fibre. H. W. Kearns, Baxenden House, Baxenden, Accrington, and J. Barnes, Marl Bank, Accrington. Eng. Pat. 8,589. April 13, 1898.

Tannate of titanium is soluble in oxalic or hydrofluoric acid, but is precipitated by the addition of a soluble chloride or sulphate. As the method of soaking the cloth or yarn in a solution of tannin and passing through a titanium bath has been found to be tedious, the following procedure is proposed:—In the first place a crude acid oxalate of titanium liquor is prepared by dissolving crude acid sodium titanate in oxalic acid. The acid sodium titanate is obtained by fluxing ground rutile with caustic soda and washing out the excess of soda. The resulting solution when cold is let down to 38° Tw., and a solution of commercial tannic acid added (10 lb. in 8 gallons water), producing a tannin-titanium oxalate. For dyeing, this solution is reduced to 2° Tw., which produces a full orange yellow. The yarn is run through the bath, wrung up and plunged into a bath of sodium chloride, containing ¼ lb. per gallon, and kept at a temperature of 160° F. About five minutes suffices to fix the tannate of titanium on the fibre. Lighter shades can be obtained with more dilute solutions. Precise quantities are given throughout in the specification (See also *C.T.J.* 608, p. 18.)

THE ROYAL COMMISSION ON SEWAGE DISPOSAL.

INQUIRIES are heard from time to time as to the progress which is being made by the Royal Commission on sewage disposal. The Commission have had over 25 expert witnesses before them, including chemists, bacteriologists, biologists, medical officers of health, and engineers, some of these witnesses having occupied the time of the Commission for two days each. Members of the Commission have visited the works of sewage disposal at the following places:—Exeter, Yeovil, Manchester, Rochdale, Chorley, Sutton, Doncaster, Dewsbury, Bradford, and Leeds. They have also been engaged in determining a number of important questions relating to the desirability or not of laying down chemical and bacteriological standards which should be obtained by effluents whether in the case of domestic sewage only or of such sewage combined with trade refuse. For this purpose they have employed experts of their own, and it is understood that the staff of chemists and bacteriologists has just been increased, so that the effluents from works of different character can be systematically studied almost hourly by day and by night under varying conditions of temperature and rainfall. No statement can as yet be made as to the term over which these experiments must extend, but it is quite clear that they are at present only in an initial stage and that in so far as bacteriological results are concerned, the Commission are dealing with a subject as to which little expert evidence is available and that the matter will have to be examined very deliberately and exhaustively before useful inferences can be drawn. These experiments are being carried out under the supervision of a committee of the Royal Commission consisting of Sir Richard Thorne, F.R.S., Professor Michael Foster, F.R.S., and Professor Ramsay, F.R.S.—*Lancet*.

TRUSTS IN THE STATES.—The New York satirical paper *Judge* has a telling cartoon on the all-pervading trusts of America. Uncle Sam is shown bestriding one of the terraces of the Capitol at Washington, and in the act of hanging over the bronze statue of Freedom which surmounts the dome the framed motto, "In Trusts we Trust," while propped against the building is the old motto, "In God we Trust," which has been taken down to make room for the new national belief.

RUBBER WORKS ON FIRE.—A huge stack of rubber cuttings took fire, last week, at Silver's Telegraph Works, North Woolwich, and, aided by the wind, the flames quickly spread to some timber stacks, and afterwards to the rubber stores, a building of 140 feet by 70 feet. This was soon completely gutted, notwithstanding the exertions of the West Ham Fire Brigade, together with steamers from the Metropolitan District and the firm's engines. The damage is estimated at several thousand pounds.

THE MANCHESTER SEWAGE.—The Rivers Committee of the Manchester Corporation recently held a special meeting for the purpose of agreeing to a formal communication to the Local Government Board with reference to the present position of the Committee's affairs. Ald. Sir Bosdin Leech presided. A draft letter explaining the steps that had been taken since the last sitting of the inquiry held in Manchester as to the manner of dealing with the storm water going down to Davyhulme with the sewage was submitted and agreed to. The document stated that several filter beds had, upon the advice of the experts engaged by the Committee, been laid down, and were now almost completed. Fresh data were also being obtained by the chemist and the experts with reference to the character of the sewage passing through the drains which remained to be coupled up to the main sewers. Sufficient information had not yet, however, been prepared to warrant an immediate further inquiry by the Local Government Board, and the Committee proposed to request the Mersey and Irwell Joint Committee to consent to a postponement of their case against the Corporation over the 4th May next, to which it at present stands adjourned. The Committee decided that copies of the letter should be forwarded to Mr. F. C. Hulton, clerk to the Mersey and Irwell Joint Committee, and to the chairman and deputy chairman of that body, Sir J. T. Hibbert and Mr. T. W. Killick.

Reports of Companies.

RIO TINTO CO., LTD.

The report of the directors of the Rio Tinto Co., Ltd., for the year ended December 31st last states that by the operation of the sinking fund the amount of unredeemed four per cent. mortgage bonds had been reduced by £58,420. drawn, and of this sum £45,000. has been applied in reduction of the outstanding expenses of issue of the bonds, and the balance, £13,420, in reduction of the larger amount which has had to be written off than usual for plant gone out of use. All interest, expenses of administration, income and other taxes having been provided for, the profit on sales of produce and other items at the credit of revenue account, including the balance brought down from the previous year, amount to £1,016,804. By a fixed charge on pyrites there has been written off extension and development account £9,634. and off overburden account £10,000, leaving £997,169. Out of this has been provided the amount of the redemption of the four per cent. mortgage bonds, £58,410; plant gone out of use and written down, less from mortgage bonds redemption, £19,940.; grange works written down, £5,000.; and there has been placed to the reserve fund £50,000, leaving a balance of £863,809. It is proposed, after payment of the interim dividend of 2s. 6d. per share on the preference shares and of 20s. on the ordinary shares, to pay a final dividend of 2s. 6d. per share on the preference shares, and 27s. 6d. on the ordinary shares, leaving a balance to be carried forward of £13,392. The quantity of pyrites extracted during the year for shipment was 644 518 tons, with an average copper contents of 2·852 per cent. The quantity invoiced to consumers in England, Germany, and the United States was 618,110 tons, against 582,540 tons in 1897, 549,585 tons in 1896, and 518,560 tons in 1895. The copper produced during the year by treatment at the mines was 20,426 tons, and the copper in pyrites shipped amounted to 13 456 tons, a total of 33,882 tons. The following quantities were brought to market, viz.: Refined copper, 18,612 tons; copper in sulphate, 981 tons; copper in pyrites, 13,502 tons; total, 33,095 tons. The stocks at the company's works at Cwmavon, consisting of refined copper, copper in process, precipitate, matte, and sulphate (in all 4,080 tons) have been carried over at cost price. The reserve heaps, from which the copper continues to be extracted at very low cost, are estimated to contain 114,708 tons fine. They are constantly being replenished, and, by the charge on the copper which is washed out, the cost in the company's books is maintained at the same figure as during recent years, viz, £4. 6s. 10d. per ton fine.

BRITISH BROKEN HILL PROPRIETARY COMPANY, LTD.

The directors' report for the half-year ending December 31 states that, as explained in the report of October last, the working of the company's business for the half-year ending June 30, 1898, was unfavourable, resulting, as it did, in a loss of £3,552, including depreciation, and reducing the balance to credit of profit from £13,881. to £10,329 The latter portion of the half-year ending December 31 shows a great improvement upon the previous nine months of the year. The price of lead has risen considerably, and at the present date continues to show firmness, while silver has not advanced in value. On the other hand, the directors' hopes of meeting with a satisfactory process for dealing with the complex ores of the mine have not been as yet realised Mr. Cowper-Cole's inventions for extraction of zinc, while presenting many elements of ingenuity and promise, have disclosed anomalies when tested on a commercial scale which have not hitherto been remedied, and no other process has come under the observation of the directors which appears to answer their requirements. Mr. Cowper-Coles, however, reports a remarkable success in the production of white lead direct from the company's ores. The directors intend to recommend a dividend of 6d. per share for the year ending December 31 last; and, in view of the satisfactory results obtained since that date, they also propose to declare an interim dividend of 6d. per share for the current year, making together 1s per share, which will be paid free of income-tax, on both the £1. and the 8s. shares alike, on May 3. This will still leave sufficient working capital to ensure the proper development of the mine and the efficient working of the plant.

R. BELL & CO, LTD.

The twelfth annual general meeting of this company was held last week at the Cannon-street Hotel, London. Mr. R. Browne-Martin, who presided, said that the Board could pay the same dividend as last year—viz., 5½ per cent. They would have been able to pay 6 per cent. had it not been for exceptional expenses in connection with the Employers' Liability Act and the advertising of the fact that there were no cases of phosphorus necrosis ("phossy jaw") in their works, though there had been instances in other works. The firm of R Bell & Co. were the oldest-established match manufacturers in the world, and they had only had one case of necrosis, which was some seventeen years ago, and the man entirely recovered.

BUXTON LIME FIRMS COMPANY.

The directors report that the net profit for the half year ended December 31, after providing debenture interest, is £12,461., which, with the balance of £4,045. brought forward from last half year, gives £16,505. available for dividend, etc. They recommend that a dividend at the rate of 5 per cent. per annum be declared upon the share capital of the company, that £2,000. be added to the reserve fund for equalisation of dividend, etc., and the balance, £4 505. be carried forward. The recommendation as to dividend and reserve are the same as the previous half year.

AUSTRALIAN GOLD RECOVERY CO., LTD

An ordinary general meeting of the shareholders of the Australian Gold Recovery Company, Limited, was held last week at the Cannon-street Hotel, E.C., Mr. Robert Smith (the chairman of the company) presiding

The Chairman said: Before asking you to adopt the report and accounts I shall take leave to make a few remarks regarding these and the operations of the company during the past year. We are pleased to come before you with a much more satisfactory statement than in previous years. As you will see by the accounts, the balance to the credit of profit and loss account is larger than on any previous occasion, and I am glad to say that profit has been arrived at after providing most liberally for depreciation on machinery, plant, and buildings, and preliminary outlays in Western Australia. As you will see from the accounts, we have written 25 per cent. off all machinery, plant and buildings, or a total of £985. 3s. 1d.—and you will bear in mind these items had been well written down in past years—besides £2,331. 19s. 9d., balance of preliminary outlays in Western Australia. The other items in the accounts are so clearly set out that I think they require no explanation to-day except at debit of balance-sheet. Sundry creditors £16,672. represents cyanide business, in respect to which we are well covered, and accordingly need give you no concern As regards our general business, the greatest progress during the past year has been made in Queensland. The process there has continued to develop, and the relations which exist between the company and the miners of that colony continue to be satisfactory. The miners have derived immense benefit by adopting the company's process. They recognise this, and in return loyally pay the royalties upon the bullion recovered. There are at the present time over 100 plants working the process, which is a good increase over the number at work at this time last year. In this colony we consider the prospects of the company are very bright, and I think I am quite safe in assuring you that when I have the pleasure of meeting you here again I shall be able to report a considerable increase in the royalty revenue. Turning to New South Wales, as you will see by the report, the company still retains its large interest in the Colar Gold Mines, Ltd. Advices from the manager of this property are of a satisfactory nature, and he expresses confidence in the ultimate success of the mine. The cyanide plant, which is capable of treating 5,000 tons per month, is now in course of erection, and is a very fine plant indeed, and it is expected that it will commence operations within the next two months. With regard to the patents in this colony we are still endeavouring to secure the necessary amendments. As regards Victoria, here we are also still before the law courts taking steps to secure the amendment of our patent in that colony. In the meantime, a large increase in cyanide operations has taken place, and the value of the outturn from this source is considerably augmented. The mining companies and others, however, who are using the process maintain great secrecy as to their operations. I am glad to tell you that the company is in receipt of a considerable revenue from our commissions on the sales of cyanide of potassium and from the manufacture of cyanide plants. During the past year we have secured a very large proportion of the orders for the supply of the chemical in the colonies, having entered into contracts with pretty well all the leading companies. Cyanide plants have also been supplied to many of well-known companies—a branch we are fostering—and with our a staff are in a position to advise regarding the construction of the most suitable plants, and I am glad to say this is generally recognised The patent runs in Australia till the end of 1901.

DIVIDEND.

Tharsis Sulphur and Copper Co.—The Board announce a dividend of 27½ per cent., writing off £47,956. and carrying forward £20,378. Last year the rate was 25 per cent.

Dynamite Explosion.—A terrible explosion occurred in a dynamite store at Jebel Jelud, in the vicinity of Tunis last week. A number of workmen were engaged in fastening a box of dynamite, using ordinary nails instead of screws, when the contents suddenly exploded. An Italian and a Maltese were killed, and a man named Nicholas was seriously injured.

Agricultural Notes.

FERTILISING POTATOES.

The Wiltshire potato experiments, which have now been conducted for some years, have hitherto been so excellent that they are worthy of special notice, in view of the coming potato season. The objects of the experiments last year at one of the stations near Calne was to compare the cropping qualities of Reading Giant, a well-known tuber, and a much newer variety, the Wonder, to show that if artificial manures are used without dung it is generally desirable that nitrogen, phosphates, and potash should all be employed; to further test the value of dung and sulphate of ammonia used together; to compare the influence of varying quantities of a complete chemical manure; and to show the value of spraying in checking disease. The Wonders, which were superior after cooking, responded better to the manures than the Reading Giant. The two varieties yielded on the average about the same quantity—just under eight tons to the acre,—but the Wonder produced the larger quantity of small potatoes. There were in all 11 plots, each plot averaging 22 perches, and the yield varied from four tons to 12¾ tons to the acre, or considerably less than the yield in previous years in other cases, when far heavier crops have been obtained. The heaviest crop was produced by the employment of stable dung at the rate of eight tons and sulphate of ammonia at the rate of 4¼ tons per acre. The Wonder produced 12¾ tons, and the Reading Giant 12½ tons; the next best crop was when stable dung was used alone, at the rate of 16 tons to the acre, although in this case there was much more small seed among the Wonders. Curiously, taking the whole average over 11 plots, there were fewer large potatoes on the plots which had been sprayed. In one instance, for example—and this is perhaps the most remarkable of all,—no manure was used on either plot, with the result that there were 3·8 tons of large Wonders and 2·75 tons of Giants where there was no spraying, but only 2·8 tons of each variety where the plants were sprayed. In each case this is omitting seed and small potatoes. There was no disease in any case worth noting. Taking the average, the Wonders produced slightly more large potatoes where there was no spraying, but the Reading Giant produced seven tons in one case, and only six in the other, so that spraying was apparently the cause of a reduction of a ton an acre in the ware or saleable potatoes. And if we take all the potatoes raised the difference is still greater—9·4 tons in one case and 8·3 tons in the other. The complete chemical manure was used on four plots in varying quantities, at from 4¼ to 12¾ cwt. per acre. The result was that, taking the combined varieties, the yield varied from seven tons to nearly nine tons per acre, the smallest dressing giving the smallest yield, and the largest dressing the largest yield. There is always, too, a curious element which upsets the value of almost every experiment. In this case there were two unmanured plots. We have referred to one where the total yield was 4·3 tons, the lowest of all, but in the other case the yield was 7¾ tons, the two varieties producing similar quantities. This was actually more than was produced by the smaller quantity of complete manure and by each of the other combinations—nitrate and phosphates, phosphates and kainit, nitrate and kainit. On the basis of a single test, therefore, no one can say with certainty that any result was owing to the manure which the soil received. It is remarked in the report that, in view of the results obtained during the four years that spraying has been conducted, there can be no doubt that in that part of the country one or two sprayings may at least be regarded as a cheap insurance against the ravages of the potato disease, and especially so when from any cause planting has been deferred to a late season. In a similar test made at another station, cut seed and whole seed were employed in different instances, with the result that the latter gave the better crop. The average weight for the whole seed—and it should be noted that the weight of one lot of seed was equal to the weight of the other—was 8¼ tons; that of the other 7 tons 19 cwt. Here again the results are so close that it is impossible to say that the smaller crop was owing to the use of the cut seed.

The Flash-point of Petroleum.—The *Daily Chronicle*, speaking of the Government Petroleum Bill, says: "Mr. Jesse Collings proposes by his Petroleum Bill to raise the flash-point from 73 to 85 degrees Fahr. There is no sense or logic in such a proposal. It is not in accordance with the evidence in favour of raising the flash-point given before the Select Committee; and it is an admission that the Government was wrong in opposing Mr. Reckitt's Bill. Many of the fires which arise from lamp accidents are caused by the explosion of oil which analysis has proved to have a flash-point of from 80 to 85 degrees, and independent experts hold that 100° should be the lowest point to which the standard should be raised. Once it is admitted that there is a danger in oil there is no alternative but to raise it to a point which will secure safety. The Government Bill contains proposals which will disorganise the lamp trade; it will do no good and please no one—not even the Standard Oil Co., whose interests have hitherto been the Government's special care."

SOCIETY OF CHEMICAL INDUSTRY.

NOTTINGHAM SECTION.

THE annual meeting of the above section was held in Nottingham on March 29th, Mr. James O'Sullivan being in the chair. The officers and committee for 1899-1900 were elected, Dr. F. Stanley Ripping, F.R.S., being the new chairman. Mr. Jas. O'Sullivan takes Mr. J. M. C. Paton's place in the vice-chair. Mr. Paton, Mr. W. Scott Herriott, and Dr. A. L. Stern take the place of the retiring members of committee. Mr. S. J. Pentecost remains hon. treasurer, and Mr. J. T. Wood hon. sec.

The usual formal business terminated by a hearty vote of thanks to the University Committee for use of rooms in the college, which was proposed by the chairman and seconded by Mr. Carulla.

A paper was then read by Mr. Pentecost on "The Adulteration of Sumach," which was illustrated by lantern views prepared by Mr. M. C. Lamb during his researches on the subject. By means of strong nitric acid the true sumach leaf may be dissolved out of a mixture. By aid of the microscope the various constituents of the residue can be referred to their true origin. The appearance of the leaves of the adulterants generally used is very characteristic, differing from one another and from the genuine plant by the shapes of the hairs attached to the leaves, and by the shape and numbers of the stomata. Mr. Pentecost pointed out that notwithstanding the introduction of synthetic dyes, the subject was still of interest to the dyer as well as the tanner. A discussion followed in which the chairman, Mr Archbutt, and others took part.

Mr. F. J. R. Carulla then read a short paper on "The Function of Boric Acid in Soaps," in which he said that boric acid is of great use to destroy alkalinity, but it cannot remain in the free state in the wash water when the soap is put into use, as seems to be imagined possible. It can have no antiseptic effect. For the introduction of antiseptics that require freedom from alkali into the soap, boric acid is, however, invaluable. A toilet soap under the fancy name of "Microvoid" is now made in which this principle has proved to be most effective.

The chairman said that the matter was of some importance as boric acid in 2% solution was used for the eyes, and, of course, a boracic acid soap would not have the effect of this solution. Carbolic acid would similarly re-act in a soap, and be rendered inert.

Mr. Pentecost said that he did not find a moderate percentage of alkali in a soap injurious to the skin. He could use a soap containing as much as 8% of carbonated alkali—not caustic alkali of course. He would ask whether the short time during which the soapy solution remains in contact with the skin when washing can be regarded as sufficient to effect the desired object when using an antiseptic soap.

Mr. Adams thought it remarkable that the views described as to the action of acids in soap should be prevalent. Boric acid and similar bodies would necessarily precipitate the fatty acids. He would like to know whether the addition of boric acid to the soap would not interfere with its lathering qualities.

Mr. Carulla replied that an addition of so much as 5% of boric acid did make it difficult for the soap to lather. It made it, however, a very lasting and economical soap; still, this quality could be got with a much smaller percentage of boric acid, whilst benefiting the soap in other ways by the reduced quantity used.

Answering Mr. Pentecost, he would say that idiosyncrasy entered into the question of the use of soap as in other things. Some people could use a soap that would be very irritating to others. In regard to the point raised as to the time of contact of the soap solution with the skin, he would only say that it was a frequent argument against antiseptic soaps, but he did not see its force. The object of using a soap of the kind is to get rid of disease germs and to prevent their transmission from one person to another. With the increasing use of super-fatted soaps for toilet purposes, and the fact that disease germs can live and multiply in oils and fats, it is quite likely that much disease is transmitted from one person to another by using the same tablet of soap. This could not happen with a genuine antiseptic soap. Then again, disease germs are washed off the skin and carried into the water. Here they will remain in long contact with the soap solution which, if powerful enough, will put an end to their further power for harm.

Dr. Kipping, F.R.S., said that it was easy enough to render extensive surfaces of the skin, such as the hands, antiseptic even with plain water, but for such places as under the finger nails, which could not be readily dried and might form nests for bacteria, the resulting prolonged contact with the solution of an antiseptic soap was obviously a great safe-guard.

The proceedings then terminated. The next meeting is fixed for April 26th at Leicester.

Nitrate Statistics.—The Permanent Nitrate Committee, in its public statistical circular for April, states that the total exports of nitrate of soda to Europe for March were 1,782,000 qtls.; loading for Europe April 1, 1,726,000 qtls.; imports, Europe, March, 142,700 tons; deliveries, Europe, March, 198,760 tons; visible supply, Europe, April 1, stocks and afloat, 516,280 tons.

FIELD FOR CHEMISTRY IN SUGAR MANUFACTURE.

AN interesting paper, written from the practical sugar maker's point of view, has been communicated to the Franklin Institute by Mr. W. Skaife which deals with those problems which daily present themselves to factors and whose solution is of commercial as well as scientific importance. In the first place, says the writer, the function of the

AGRICULTURAL CHEMIST

in relation to the sugar manufacturer, is one of primary importance, as the work of Maercker, Kuen and Vilmorin, and a host of others can testify. The use of manures, scientifically, and the study of the diseases of the plant have greatly influenced not only the sugar content of the juice of the sugar-beet, but also the nature of the impurities contained therein; for instance, by the suppression, in a great measure, of the use of potash salts, and in some ways of nitrogen, and by the study notably of Dr. Kuehn, of Halle, of the nematoden, whose spread threatened to be as serious to the sugar-beet as the phylloxera to the vineyard. Perhaps to Vilmorin is due, more than to any other, the wonderful result of raising the sugar content of the beet from 8 per cent. to 22 per cent., a triumph of agricultural chemistry, and an indicator of what may be done in this direction in the sugar-cane fields, where to-day no progress of practical value has been realised. The reasons for this are many; perhaps the greatest being the nature of the countries where the sugar-cane grows, but also, the nature of the plant itself, in that it produces only flowers that are not fertilised in a natural way, the propagation instead being caused by the sprouting of the joints underground. In consequence of this, the crossing of various kinds is nearly impossible, and we go on using the same unimproved plant and relying on empirical knowledge for the selection of the kind. Here is the first and greatest field for the chemist—the study of the improvement of the cane and its economical manuring. Perhaps when the cane-sugar industry shall have such an establishment as we may see connected with the great seedsmen in Europe, where 3,000 or 4,000 polarisations are made in a day to select mother-beets, we may hope for some improvement in the cane fields. Cane has been raised from seed in Java, Demerara, and elsewhere, but no practical results have come forth as yet.

Passing from the fields to

THE SUGAR-HOUSE,

we have no chemical problem confronting us in the case of the sugar-cane, for it is, in a well-organised plantation, immediately ground up, but sugar-beets, on the contrary, are stored in silos for several months, and a loss of crystalline sugar results, equal often to 2 per cent. on the weight of the beets, or over 10 per cent. of the total sugar in the juice. This loss occurs chiefly in the warmer countries where beet-sugar is made, and is severely felt, for instance, in some parts of France. It will naturally be caused by the sprouting of the beets in the silos, but also occurs apart from this; and to check it until the factory can slice up the whole crop, is a problem worthy of any chemist's skill.

To follow the sugar-beet, first, as it goes through the process of manufacture, the first chemical treatment which it undergoes is the extraction of the juice by means of diffusion. Mathieu de Dombasle, some seventy years ago, started the idea, and Robert of Seelowitz, thirty years afterwards, put into practical shape the process now universally in use, which, as you are all aware, is an imperfect osmosis, in which the uncut cell walls serve as the membrane and the broken cells discharge their whole content into the surrounding liquor. As handled to-day, the diffusion battery is a very excellent apparatus; the content in the sugar of the refuse being only ¼ of 1 per cent. after an hours' contact with water, and the juice of a better quality is obtained more rapidly than in any other way. A great deal has been written concerning the handling of batteries, the question of temperature, etc., but still there remains one important matter from the manufacturers' point of view, and that is the dilution of the juice. Instead of obtaining juice of the same density as in the original beet, we have one containing 10% to 20% more water which has to be evaporated later on at the expense of so much fuel. This dilution may be reduced by either raising the temperature of the battery, or by increasing the time of contact, but the former results in the extraction of a more impure juice, and the latter necessitates a much increased capacity. It is possible that a partial solution of the problem, at least, lies in acting on the slices by water under high pressure. It may certainly be assumed that if the process of dialysis is to be relied upon, all we can do to hasten matters is to provide for a more intimate contact between the cell wall and the water, for we cannot change the character of the cell wall without damage to its value as a membrane, nor can we use any liquid except alcohol, which will cause the more rapid passage of the crystalline sugar, and needless to say, its use is not to be considered, on account of the expense.

The diffusion process, so successful in beet-sugar manufacture, has found little application as yet in cane-sugar houses, principally on account of the dearness of fuel in the countries where cane-sugar grows. The grinding of the cane in mills produces a juice without dilution, or of a dilution that can be easily controlled, and is a purely mechanical operation, leaving a residue (bagasse) containing 7 per cent. of sugar, which supplies all the fuel needed for the production of the steam. It seems a wasteful business to burn sugar, but the reduction of the sugar content of the bagasse by pouring water on the mills is of doubtful value, inasmuch as a great many impurities are carried into the liquor along with the sugar, and an increase in the quantity of molasses produced is the main result.

Having now separated the juice from the fibre, the chemist's attention may be concentrated on the former, and he is confronted with an aqueous solution containing about 15 per cent. of crystalline sugar and 3 per cent. of organic and inorganic impurities, out of which he is to extract as much sugar in as pure and dry a form as possible, and for as little money as possible. Two means of solving this problem present themselves—he may rely on the tendency of the liquor to crystallise, and to help this proceed to clarify the juice and then evaporate it, or he may precipitate the sugar from its solution in combination with lime, strontianite of baryta, and subsequently decompose the saccharate.

We know by experience that the first method is the one that is commercially valuable, and that the second one may be used on the final molasses only, after as much sugar as possible has been extracted by crystallisation; the great bulk of the saccharate precipitate is the main difficulty in the way of this process, which is chemically very perfect.

THE CLARIFICATION OF THE JUICE

is a matter on which the attention of chemists has been steadily concentrated now for forty years, without materially altering the process of Perier and Possoz, who added an excess of caustic lime to the juice, allowed this to settle, thus producing a partial clarification, and then precipitated the greater part of the lime dissolved in the juice by carbonic acid gas. Later on, Jelinek pumped in the gas without waiting for the settling, and precipitated the whole mass together, precisely what we do to-day. The operation is repeated more than once now, and a very clean, clear filtrate is produced, with, however, a considerable expenditure in labour and machinery. It is a violent remedy considering the small amount of impurities we have to deal with, but it is our only one. Its principal defects are the great quantity of lime needed (equal to 3 per cent. on the weight of the raw material), necessitating special limekilns and involving voluminous precipitates, whose separation from the filtrate needs pressure filters of great size and strength, and whose washing free from sugar means more water to evaporate.

The efforts that have been made to replace this clarification have been various in kind and many in number, but only those which tend to produce a similar precipitation in the presence of the impurities with other reagents have had any success. Very beautiful liquors may be produced by the action, for instance, of lead acetate, of alumina, of soluble phosphates, of tannic acid, etc., but the practical sugar-maker has never been able to see wherein an improvement lay over the ancient carbonatation process. This process is generally described as an entanglement of the impurities in the falling calcium carbonate, but it may be looked upon as nothing more than a mechanical filtration of a very perfect kind, in which the filtering medium is moved through the liquor instead of the liquor being forced through a cloth, or whatever may be used. It is possible, that by bearing this in mind, we may see our way to avoiding some of the troubles we are now afflicted with, and by performing a similar operation in such a way that a more intimate contact may be arrived at between the liquor and the falling carbonate, as good a result with less expenditure of material may be arrived at.

In cane sugar-houses the elaborate systems of clarification by carbonation and filtration have been tried and found wanting, for we find that by the action of a very small quantity of lime, and some heat, so great an effect is produced, that what would be gained by more perfect work from a purely chemical point of view would be lost commercially, owing to the extra time and apparatus needed. We are much nearer to the solution of the defecation problem in cane sugar, than in beet sugar-houses. Some work which I have carried on for a couple of years in Cuba, leads me to believe that a continuous and almost automatic clarification of cane juice, at a low temperature may be brought about, by extremely intimate mixtures of the lime and juice in exact quantities, but it would appear that the raw beet juice is too refractory a material to yield to such simple treatment.

The chemist's mind has turned of course with some hope to electricity, for the clarification of juice, and many and exhaustive have been the trials which have been made with this ghost-like element. Great Corporations have erected large plants to test the possibility of separating the impurities from the raw juice of the cane and the beet by electrolysis, with the result, as far as the general sugar public know of demonstrating that while a great purification takes place it costs too

much horse-power to effect it. These results, however, should not deter the chemist or electrician from further investigation, for it is quite possible that after the great mass of the impurities are removed, we may effect something by the application of the current to concentrated solutions.

In investigating the various methods of clarification, it has been customary to look to the removal of impurities as the standard of value. That is to say, the proportion of sugar to total solids dissolved in the juice is determined before and after clarification and the difference noted. This proportion, the coefficient of purity, as it is called, is the great guide of the sugar-maker for want of a better one. It is manifest, however, that when the quality of the impurities present is not considered, liquors of the same coefficient are not of the same value, and this leads to many errors in the treatment of the juice. Inasmuch as the object of removing impurities is to facilitate crystallisation, we ought to attack those substances which give rise to a viscous or gummy condition of the liquor. All our efforts in fact should be directed to producing a medium in which the crystals may move with ease, and I may say, that for some time past I have abandoned tests for everything but viscosity with extremely encouraging results.

The less viscous a liquor is the more perfectly will it filter, and the filtration of liquor is the most important part of its treatment. Could we take the raw juice from the cane or beet and filter it cold through a dense medium, it is doubtful whether any further clarification would be necessary, and in well-conducted sugar houses the greatest care is now taken to produce liquors free from any suspended matter. Five or six different filtrations of the same liquor may now be seen in many beet sugar-houses, but the mechanical treatment of the juice is only beginning to be understood, and is destined to play a much more important part in sugar manufacturing as well as in other industries. We know now only the use of a filtering medium, through which a liquor passes under pressure leaving impurities on one side; we have yet to observe the action of masses of suspended matter in an extremely minute state of division and brought into contact with the liquor by mechanical means. Mechanical filtration has already wrought one great change in the manufacture of raw sugar, that is, the total suppression of the use of bone charcoal and all its attendant cost and discomfort. Some refineries even are now working high-grade sugars without char, being enabled to produce a cold filtration of heavy liquor through the use of infusorial earth. The passage of this finely divided silicious matter through the liquor effects the mechanical filtration which the cloths on the filter presses complete. I would strongly recommend the intending investigator to turn his attention towards the production of a substance in the finest possible state of division, and to apply this to liquors which are to all appearances filtered already. In this work the microscope might be used to great advantage. It has yet to play its part in the examination of sugar liquors, and this part may be a mighty one.

(*To be continued.*)

LIQUEFIED AIR.

THE following is a good example of how misleading Popular Science may be when the fancy of the journalist—particularly the American journalist—is allowed to run free. Many of the facts are substantially correct, but they are arrayed in glory that should make even the lily of the field hide its diminished head:—Professor Charles E. Tripler claims success in perfecting his liquid-air motor says the *New York Herald*. He predicts that it will be a commercial triumph, and that electricity is not destined to be of more service to mankind. Liquid air may be as terrible as dynamite or as gentle as sunlight, according to the way in which its power is used. And how is liquid air made? Tripler compresses ordinary atmospheric air with a 50 h.p steam air-pump until it becomes red hot and is run through a coil of pipe submerged in a tank of cold water and cooled. The compression goes on and on, until a white frost apparently bursts through the very fibre of the steel pipe containing the liquid air within. Having once started the machinery and manufactured a supply of the fluid at 312° below zero, the ordinary atmosphere of the room coming in contact with the frost-coated pipe it is soon robbed of its natural heat derived from the atmosphere, and then liquefies, and thus a constant stream trickles down the tube or pipe into the receptacle below. There is but one step beyond this compression. It is when Professor Tripler gives a few extra turns to his machinery, and freezes the liquid air into ice. It is then frozen air. A block of it in your hand would feel like a bar of iron at white heat just out of a blast furnace. It is an uncanny fluid this mysterious liquid air. You can't tell it from water in appearance. It would burn your hands off at the wrists if you attempted to bathe in its limited depths. Yet dash your hand into it and the moisture between your skin and the 312° of frost protects you, and by instantly withdrawing it you get not even moisture. It adheres no more than quicksilver. Spill a gallon of liquid air over the finest silk gown, and it will leave no stain. Many a lady got showers of this steaming fluid, but it glided off as in a spell of witchcraft, clinging to nothing except the cracks in chapped hands to some of the men. Then it burned like liquid fire or sulphuric acid. Liquid air sprayed from an atomiser on to cotton, if lighted, will explode. But in its ordinary liquid form it is not in the least dangerous, even under intense heat, though a lighted cigar or match held over the mouth of the vessel will give a flame as intense and beautiful as electricity. It is only when you mix it with alcohol or turpentine or attempt to confine the liquid air that its dynamite power is revealed. Professor Tripler poured a pint into a large copper tube, then drove a wooden plug into the mouth with a hammer. In less than half a minute the wood shot against the ceiling with the report of a gun. A bit of cotton waste, saturated with liquid air, put into a 2in. copper tube, placed within a section of heavy wrought-iron piping was recently placed in the yard behind the laboratory. It was touched off with a lighted match attached to a long pole. The explosion that followed not only burst the pipe, but it shook the building, knocking out a bit of the rear wall, and jarred the neighbourhood like an earthquake. Then it occurred to Professor Tripler that if less than a spoonful of liquid air could turn a bit of fibre into veritable guncotton, one of the most powerful explosives known to science, its steady-going mechanical power must be far greater than steam, and makes it a formidable rival to electricity. In freezing a glass of alcohol at the Endicott Hotel a match, dropped on the frozen mass, caused an explosion that sent half-a-dozen men sprawling on the floor. For practical purposes it is claimed that liquid air will prove of inestimable value. It furnishes a clean, dry, "cold", easily delivered, it is said, at any required temperature, which will enable shippers to send fresh meat and fruits in perfect condition long distances in cars or ships. Warehouses can be kept colder than the Klondyke the year round for preserving perishable merchandise. Special hospital rooms in the tropics or elsewhere, from New York to Calcutta, may be kept at any degree of frigidity, destroying all germs of disease, and not only making yellow fever impossible, but instantly stopping the ravages of that dread scourge. The liquid sprayed on dangerous wounds will arrest blood poisoning. It is said that the cauterising effect of a spray of this liquid frost, 312° below zero, is a thousand times more effective than nitrate of silver, which destroys the flesh, and which cannot always be controlled. With liquid air cauterisation can be stopped instantly. Professor Tripler says there is no reason why it should not revolutionise warfare. It will not only expel projectiles with tremendous force, but, no matter how rapid the firing, the guns will always be kept cool.

Trade Notes.

COAL IN KENT.—The Kent Coal Exploration Company, Limited, have received news that a seam of coal nine inches thick has been reached at the Ropersole (Barham) boring. This coal is described by the Company's geological adviser, Prof. W. Boyd Dawkins, as good blazing bituminous coal, without traces of crushing.

SPENCER, CHAPMAN, MESSEL & CO., LTD.—We are informed that the businesses of Spencer, Chapman & Co. and Chapman, Messel & Co., of Silvertown, and 36, Mark-lane, E.C., have as from the 1st April, 1899, been converted into a company, under the name of Spencer, Chapman & Messel, Limited, with a capital of £300,000. No shares will be issued to the public.

CHANGE OF ADDRESS.—The Nichols Chemical Company has removed its New York offices to the Bowling Green Building. The former offices of this company, on Liberty Street, have been secured by the General Chemical Company.

THE S. O. CO. BUYING SALT WELLS.—A despatch from Warsaw says that the salt wells in the Warsaw field have been bought by the Standard Oil Company. The salt companies have an option on taking the purchase price entirely in cash or partly in stock of the Standard Oil Company.

THE GENERAL CHEMICAL CO.—The directors of the recently incorporated General Chemical Company are:—President, Wm. H. Nichols; Sanford H. Steel, Geo. W. Kenyon, Charles Robinson Smith, James L. Morgan, Jr., Louis S. Wolf, J. Herbert Bagg, Eugene Waugh, Frederick Phillips, C. P. Tiers, E. H. Rising, H. F. Chappell and H. W. Chappell. The company embraces the following firms: Nichols Chemical Company, Highlands Chemical Company, James L. Morgan and Company and the Martin Kalbfleisch Chemical Company, New York; the National Chemical Company, Cleveland, O.; the Passaic Chemical Company, Newark, N.J.; the Dundee Chemical Works and the Lodi Chemical Company, N.J; the Chappell Chemical Company, Chicago; the Moro Phillips Chemical Company, Philadelphia; the Fairfield Chemical Works, Conn.; and James Irwin and Company, Pittsburg. The authorised capital is £5,000,000., of which one-half is 6% cumulative preferred stock and one-half is common stock.

The Clarification of Oils.—A hydro-silicate of aluminium and magnesium is being introduced by the Petroleum Engineering and Construction Co., 28, Devonshire Chambers, Bishopsgate Street, London. After clarifying the oil, the earth can be regenerated by heating, and is again ready for use. It is now being extensively used abroad for bleaching and clarifying paraffines, vaselines, lubricating oils, and petroleum. Also animal and vegetable oils, such as linseed, rape, olive, cottonseed, castor, palm, cocoa, and rosin oils, lard, tallow, grease, neatsfoot, cod-liver oil, and fish oils.

The Nitrate Agency Litigation: Heavy Damages.—In the Queen's Bench Division, Mr. Justice Kennedy gave judgment last week in the case of Lockett and Another *v.* Lagunas Nitrate Company, which was an action brought by Messrs. W. & J. Lockett, of Liverpool, to recover damages for breach of contract, under which the defendants undertook to employ the plaintiffs as their sole mercantile agents in England for a period of ten years at a commission of 2½ per cent. on all nitrate sold in England, and 1½ per cent. on all nitrate sold on the west coast of South America. The agreement was taken over by the present company on its formation, being originally entered into with the Lagunas Syndicate, Limited, the vendor company. In March, 1896, there was a change in the directorate of the Lagunas Nitrate Company, which led to a breach of the friendly relations between the company and Messrs. Lockett, with the result that from that time onwards the defendants declined any longer to employ the plaintiffs as their agents. The case was tried before Mr. Justice Kennedy and a special jury last year, and referred to the Official Referee (Mr. Pollock), who awarded the plaintiffs £20,070. damages, and a further sum of £5,000. as prospective damages for the loss likely to accrue in consequence of the defendants not carrying on business during the remaining three years of the contract. His Lordship now gave judgment for the plaintiffs for £25,070. 12s. 11d., with costs of the action and reference. Stay of execution was granted on terms agreed.

The Lagunas Nitrate Co.—A correspondent, who signs himself "Common Sense," writes to the *Financial News*, appealing to his fellow-investors to know how much more folly they are to stand from the present board for having squandered one year's profits in law costs. He says:—"We are dissipating our dividends for years by the proposed action of the board in appealing from the recent decision of Mr. Pollock (the Official Referee). Messrs. Slaughter and May really should instruct the directors, if no one else can, that Lord Justice Romer's decision is not likely to be upset by the House of Lords, after having secured the unanimous assent of the Master of the Rolls and two other Lords Justices. It is all very well for the foreign members of the board to put their trust in promises of successful litigation and to gratify personal animosity. From the day Mr. Robert Harvey was driven from the chair we have not had a farthing in dividends, and the profits are swallowed by lawyers' bills, and we risk all future prospering by appeals to the House of Lords. At the meeting at Cannon-street Hotel, when, by a majority of the foreign shareholders only, this policy of expatriation of the men of the nitrate world was decided upon, the directors and shareholders were warned by a Queen's Counsel, who was himself a shareholder, that before relying on Dr. Swinfen Eadie's vision of successful action they ought to hear what the case was that was submitted to him. A dividend was declared and never paid. The expenses of the action for rescission of the contract were nearly £20,000., and, even if successful, barely a quarter would have passed the taxing master, and now £25,000 is to be paid Messrs Lockett simply for the personal dislike of the present board to a firm which has brought success to the Liverpool Nitrate and every company with which it has been connected. United action is necessary if even the shells of the oyster are to be spare.

FOREIGN REMITTANCES.

Owing to the inconvenience created by the various ways in which foreign subscriptions are remitted, we respectfully beg to inform subscribers that a *Crossed* Money Order is the most satisfactory method of remitting, both for them and ourselves. In the case of a Money Order, a letter advising us of same should always be sent otherwise, owing to post-office formalities, much delay in tracing and acknowledging foreign remittances is inevitably entailed in this country.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols continue to fluctuate by farthings, 90's now standing at 7½d. and 50/90's at 7¾d., but with very little doing thereat. Carbolic acids are firm and moving satisfactorily at 1s. 11½d. for 60% crude and 6¾d. for 40% crystals. Naphthas are quietly steady at 4d. for crude and 1s. 1d. for solvent. Creosote is strong and selling freely at full values. Anthracene is attracting a little more attention at 3¾d. to 4d. for 30% A and 3d. to 3½d. for B. Pitch is steady with a promising outlook. Quotations are 26s. to 27s. f.o.b. East Coast; West Coast, 24s.

Sulphate of ammonia is easier in all positions. Forward business is slow, and makers might be disposed to accept lower prices on long contracts. Beckton quotation has been withdrawn. Closing prompt values are:—London (outside makes), £11.; Hull, £10. 17s. 6d. to £10. 18s. 9d.; Leith, £11. Nitrate of soda steady.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade the activity in all departments continues, and works are well engaged. In values there is little or no change to record. Caustic soda in all positions remains steady, at the current quotations f.o.b. Liverpool—viz., 77%, £7. 12s. 6d.; 74%, £7. 7s. 6d.; 70%, £7.; 60%, £6. per ton. Ammonia alkali is in good general demand for the home trade, and price unchanged at £3. 17s. 6d. bags, f.o.r. makers' works. Bleaching powder is selling freely at £4. 17s. 6d. to £5. hardwoods, f.o.b. Liverpool; softwoods £4. 2s. 6d. to £4. 5s. f.o.r. makers' works. Saltcake steady at 29s. per ton in bulk f.o.r. Lancashire works. Soda crystals and bicarbonate are without alteration in value. Chlorates of potash and soda remain at 3½d. and 3¾d. per lb. respectively. Nitrate of soda is a firm market, the advance in price being maintained. Sulphate of copper has again risen, and spot quotations are £24. 15s. to £25. per ton, f.o.b. Potash, caustic and carbonate, is in good all-round request, and prices are unaltered. Brown acetate of lime is steady at £4. 17s. 6d. to £5. per ton, ex ship; grey, £7. 15s. to £8. per ton. Acetate of soda, £12. 10s. to £13. per ton, ex ship. Foreign white acetate of lead, £25., c.i.f. Acetic acids unchanged. In white powdered arsenic there is an active demand, and strong advance to £18. 5s. per ton, f.o.r. Garston. In aniline oil and salt there is no alteration in value. Carbolic acids are in moderate request, and prices firm. Yellow prussiate of potash is quoted at 7¾d. nett, and soda 5¾d. to 6d. per lb. For cyanide, 98/100 %, the market is strong at 1s. 1d. per lb.

THE METAL MARKETS.

LONDON, Wednesday.—Pig iron easier: Scotch warrants closed at 54s. 7d.; Middlesbrough, 48s. 5d. cash; and hematite, 59s. 1d. Copper firm: Chili bars, G.O.B.'s and G.M.B.'s, closed at £70. 15s. to £71. cash, and £70. 12s. 6d. to £70. 17s. 6d. three months. Tin steady: Straits closed at £111. 5s. to £111. 15s. cash, and £111. 17s. 6d. to £112. 7s. 6d. three months; Australian, £111. 12s. 6d.; English ingots, £114. to £114. 10s. Lead firm: Spanish, £14. 7s. 6d.; English, £14. 10s.; Silesian spelter, ordinary, £27. 15s. Nickel, 1s. 2½d. Antimony, £39. Quicksilver: First hands, £8. 5s.; second hands, £8. 2s. *Copper shares* steady: Cape, 4 1/16 to 4 1/8; Copiapo, 3 15/16 to 3 31/32; Libiola, 2 1/16 to 2 1/8; Mason and Barry, 3¾ to 4; Rio Tinto, 41 7/16 to 41 9/16; Tharsis, 8⅜ to 8⅝.

GLASGOW, Wednesday.—Market easier, and a moderate business. Scotch done at 54s. 8½d., 54s. 6½d., 54s. 7d., and 54s. 6¾d. cash; also at 54s. 10d., 54s. 9d., and 54s. 9½d. month; buyers, 54s. 6d. cash; sellers, 54s. 7d. Cleveland done at 48s. 5½d. cash, and 48s. 8½d. to 48s. 6½d. month; buyers, 48s. 4d. cash; sellers, 48s. 5d. Cumberland hematite done at 59s. to 58s. 11d. cash, and 59s. 3d. month; buyers, 58s. 11d. cash; sellers, 59s. Middlesbrough hematite idle.

LIVERPOOL OIL AND COLOUR MARKET.

Wednesday.

OILS.—Palm oil is steady, but buyers are operating very sparingly, and there is scarcely sufficient business passing to properly test prices. Olive is in fairly good demand, and spot sales of Spanish have been made at £31. to £31. 10s. per tun. Linseed is steady at 19s. 3d. to 19s. 6d. cwt. for Liverpool makes in export casks, these being sellers' quotations. Cottonseed rules firm at 17s. 6d. to 18s. cwt. for Liverpool refined. Castor oil is fairly steady, 250 cases of good seconds Calcutta having been done for June/July shipment at 2¾d. Spot business has been carried through at 2⅝d. Sales of first pressure French have been made at 2¾d. to 2 7/8d. per lb. Resin is not in very good demand, but so far previous rates are still maintained. Spirits of turpentine are in but moderate request, although the price has fallen to 33s. cwt. Petroleum is very quiet, with sellers asking 6d. to 7¼d. for American, and 5¼d. to 5⅜d. per gallon for Russian refined.

COLOURS.—Prices are steady, and practically without change. Ochres: Oxfordshire—common £10, medium £12., best £15.; Derbyshire—common 40s., medium 50s., best 60s.; Welsh—best 90s.; seconds, 50s., and common, 18s.; Devonshire, 40s. to 45s.; French, J.C., 65s. Umber: 40s. to 45s. White lead: £16. Red lead unchanged. Venetian red: £6. to £10. Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7.; medium, £10.; finest, £20. Zinc oxide: £22. 10s. to £25.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—There is nothing of any importance passing here; every department is permeated with holidays which have extended in some instances up to Wednesday morning. Prices are unstable, yet sellers imagine that the tendency of prices should be upward and are holding out for full prices or even an advance. In the seed market there is absolutely nothing doing. Cottonseed in all positions has reached £6. per ton. Refined cottonseed is steady and quoted in all positions from 16s. per cwt., naked, to 16s. 1½d., whilst crude is quoted 14s. 10½d. spot and to August. Casks £1., and ordinary barrels £1. 10s. per ton extra. Linseed oil is quoted 17s. 3d. per cwt. spot, naked, and 16s. 6d. May/August; boiled and refined, £1. to £1. 10s. per ton extra. Turpentine, 32s. 9d. to 33s. per cwt. Olive oil quiet and in limited supply, being quoted according to origin from £32. to £33. 10s. per tun. Olive oil soap, £16. to £18. per ton. Castor oil, extracted here, cold drawn pharmaceutical, 28s. 6d. per cwt., in barrels; 3 7/16d. per lb., in cases; pure firsts, 26s. per cwt, in barrels; 3 1/16d. per lb., in cases; pure seconds, 25s. per cwt., in barrels; 2 15/16d. per lb., in cases. Arachide nut oil from 26/- per cwt. Oleines firm and unchanged, £18. 10s. to £21. per ton. Cod oil, £16. to £18. per ton.

CAKES —Business quiet but prices firm and steady, quotations being: Linseed cakes, 95% pure, £7. 15s. to £7. 17. 6d. per ton. Oilcakes (linseed) £6. 15s. to £6. 17s. 6d. Russians, £7 to £7s. 10s. Cotton cakes firm, best makes being quoted £5. to £5. 1s. 3d. per ton; seconds, £4. 17s. 6d. to £4. 18s. 9d.; decorticated, £6. to £6. 7s. 6d. Rape cakes: Black Sea, £4. 2s. 6d. per ton.

PAINTS.—With the opening of the new quarter the summer demand should be soon experienced. Paints, ordinary colours, from £10. per ton; ready mixed from £24. per ton. Leads unchanged. Black varnish, £5. 15s. per ton. Paint remover from 30s. Other varnishes unchanged.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, WEDNESDAY.

Glasgow local spring holiday falling this year on Monday, April 3rd, the market for some days has been rather out of gear. It is now getting into form again, and, thus re-formed, it shows one or two changes worthy of being noted. The recent boom in sulphate of ammonia appears to have quite exhausted itself. Based as it was solely on the strong local demand, this was to be looked for, because the needs of the seed time are now pretty well overtaken. Prompt f.o.b. Leith price has fallen back on £11., and will no doubt go lower. Forward business again has been checked, because although sellers are easier the buyers hold off expectant of a drop of some consequence. Mineral oils and paraffins are unchanged, except in the one item of burning oil, which being now into its off season is quoted a farthing a gallon down. General chemicals unaltered.

Chief prices current are:—Soda crystals, £2. 5s. to £2. 7s. 6d. basis nett, Tyne; soda ash, £4. 2s. 6d. to £4. 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 5s. to £4. 15s. nett, Glasgow; caustic soda, white, 74° £7. 7s. 6d., 70/72° £7., 60/62° £6., and cream 60/62° £6., all nett, Liverpool; bleaching powder, 35/37°, £5. to £5. 10s. nett, Tyne; saltcake, 29s. to 30s.; borax, English refined, £16., and boracic acid, £26. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s., nett, Liverpool; bichromate of potash, 3½d., less 6% for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d., less 6% for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow); chlorate of potash, 3⅝d., less 5% Liverpool; nitrate of soda, 8s. 6d. to 8s. 9d.; sulphate of ammonia, £11. 0s. 0d., prompt, f.o.b., Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £24. 0s., less 5% Liverpool; paraffin scale, hard, 1⅞d. to 2d. per lb., and soft 2d. per lb.; paraffin wax, 120° semi-refined, 2¼d. to 2½d. per lb.; paraffin spirit (naphtha), 9d. to 10d. per gal.; paraffin oil (burning), No. 1, 6¼d.; and crystal, 6¾d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 10s. to £5. 5s., 885° £5. 10s. to £6., and 890/895° £6. 5s. to £6. 10s. Week's imports of sugar at Greenock were 10,500 bags beet unrefined.

TYNE CHEMICAL REPORT.

TUESDAY.

Chemicals are still quiet, and business, owing to holidays, has been very limited. Soda crystals are steady at £2. 12s. 6d. per ton, gross weight, locally. Bleach, £5. 5s. to £5. 10s. Caustic, 76/77%, £8., and 70%, £7. per ton, f.o.b.

Bleaching powder, softs, £5. 10s. per ton, nett; do., hards, £5. 15s. per ton, nett; caustic soda: 76/77% £8., and 70% £7. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48% £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75°Tw., £2. 12s. 6d. per ton, nett; do., 100°Tw., £3. per ton, nett; do., 140°Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. od. per ton, nett; blanc fixe, £6. 10s. per ton nett; chloride of barium, refined crystals, £6. 15s. od. per ton, nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt steady at 9s. 6d. per ton, f.o.b. Tees.

COALS.—Business is still good and prices are well maintained. To-day's quotations:—Best Northumbrian steam, 11s. to 12s. per ton; second qualities, 10s. to 11s. per ton; small steam, 4s. 9d to 5s. per ton; gas coals, 10s. to 11s. per ton; bunker coals, 8s. to 8s. 6d. per ton; household coals, 10s. to 11s. per ton; coke very scarce and firm at 19s. to 22s. per ton.

New Companies.

Sunbeam Bleach Co., Ltd.—CAPITAL £10,000. in £1. shares. This company has been formed to adopt an agreement with D. Clarke, and to manufacture, sell, and deal in chemicals and chemical compounds and materials.

Boshof (O.F.S.) Salt Syndicate Ltd. - CAPITAL £10,000. in £1. shares. This company has been formed to adopt an agreement with C. H. Redfern, and to work, obtain, manufacture, and deal in salt, brine and any chemical products.

British Moss Litter Co., Ltd.—CAPITAL £200,000. in £1. shares (100,000 £6. per cent. cum. pref) This company has been formed to acquire and carry on the businesses of manufacturers of and dealers in moss litter or peat carried on by the British Moss Litter Co., Ltd. (incorporated in 1896), and by the Goole Moss Litter Co., Ltd. The subscribers to the memorandum of association are:—G. Dove, Holroyd Hall, via Barnsley, ironmaster; A. Love, Newton House, Laurie Park road, Sydenham, gentleman; F. Livingstone, 36, Mark-lane, E.C., merchant; W. G. Brodie, Elmbourne, Upper Tooting, gentleman; W. A. Owston, jun., Borrowdale, Sydenham, merchant; W. Smith, jun, Goole Grange, Goole, farmer; W. Dale, 36, Mark-lane, E.C., secretary.

Hills, Knight, Hunt and Co., Ltd.—CAPITAL £110,000. in £1. shares (70,000 6 per cent. cum. pref.) This company has been formed to adopt an agreement with A. Salisbury, and to carry on the business of tallow melters, bone boilers and crushers, fat refiners, margarine makers, glycerine makers, soap boilers, etc. The subscribers to the memorandum of association are:—J. C. Stone, 48, Shardeloes-road, New Cross, S.E., clerk; W. Evans, Clarence Villa, Harpenden, Herts., gentleman; E. Gill, 116, Sherrard-road, Forest Gate, E., secretary; C. B. Daniell, 33, Gwendwr-road, W. Kensington, solicitor; N. Drover, 120, Cambridge-street, Pimlico, S.W., clerk; C J. C. Pridham, 52, Fore-street, E.C., solicitor; T. O. Newman, Stansted, Essex, engineer.

Morgan Mooney and Co., Ltd.—CAPITAL £50,000. in £5. shares. This company has been formed to acquire and carry on the business of chemical manure, guano and sulphuric acid manufacturers carried on at Sir John Rogerson's Quay, and Hanover Street, Dublin, by M. Mooney. The subscribers to the memorandum of association are:—M. Mooney, Rogerson's Quay, Dublin, chemical manufacturer; W. J. Goulding, 5, Fitzwilliam Square, Dublin, D.L.; F. M. Mooney, Rogerson's Quay, Dublin, chemical manufacturer; J. Milne, Lethendry, Rathgar, Dublin, chemical manufacturer; J. R. Lloyd, 12, Upper Mount-street, Dublin, solicitor; R. Gardner, 40, Dame-street, Dublin, J. P.; V. B. Dillon, 7, Rutland Square, Dublin, solicitor.

New Lime Co., Ltd.—CAPITAL £25,000. in £10. shares. This company has been formed to lease certain lands near Buxton, Derbyshire, and to carry on the business of quarry proprietors, lime burners, and merchants, plaster and cement manufacturers, asphalters, brick and tile manufacturers, etc. The subscribers to the memorandum of association are:—J. Phythian, 4, Chapel Walks, Manchester, engineer; J. Salt, Buxton, contractor; W. B. Dickenson, Buxton, gentleman; C. H. Glossop, Bakewell, bank manager; E. M. Longsdon, Bakewell, architect; T. Swann, Chapel-en-le-Frith, engineer; J. F. Radford, Bakewell, auctioneer. Registered office, 20, Spring Gardens, Buxton, Derby.

Gazette Notices.

PARTNERSHIPS DISSOLVED.

J. H. FOSTER and E. COTTON, tallow chandlers, Leeds, under the style of J. H. Foster & Co.

W. T. CRUMP and W. H. MALLENDER, gas engineers, etc., Derby, under the style of Thomas Crump & Co.

IMPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.
Week ending March 25th.

Acetic Acid—
Holland, 5 pks. A. & M. Zimmermann
" 20 J. Owen

Acetone—
Germany, 10 dms. T. H. Lee
Holland, 2 "
" 1 R. W. Greeff & Co.

Acids—
Holland, 187 pks. Little & Johnston
Germany, 8 R. W. Greeff & Co.

Alkali—
Holland, 102 c. J. Barber & Co.
France, 6 t. "
" 50 cks. Lon. & Til. Ltge. C. & D. Co, Ld

Alum—
Germany, 100 bgs. R. W. Greeff & Co.

Aluminium Sulphate—
Belgium, £22 D. C. Thomas & Sons

Barium Sulphate—
Belgium, 119 brls. O' Hara & Hoar

Barytes—
Germany, 57 cks. Wilkinson, Heywood & Co
" 38 Burrell & Co
Belgium, 208 pks. J. L. Lyon & Co.
" 201 brls. W. Harrison & Co.
Germany, 23 cks. "

Bleaching Powder—
France, 32 cks. J. M. Steel & Co.
Holland, 40 kgs. "

Bromine—
Germany, 20 cs. A. & M. Zimmermann

Calcium Carbide—
Belgium, 40 dms. J. W. Cook & Co., Ld.

Caoutchouc—
E. Indies, 60 c. L. & I. D. Jt. Co.
Straits, 215 "
Madagascar, 32 "
N. Russia, 418 Lon. & Til. Ltge. C. & D. Co., Ld.
Thursday Is., 2 Prop. Bull Wf.
Germany, 150 W. Pope & Co.
Belgium, 80 Marshall & French
Holland, 4 Naumann, Gepp & Co.
Rangoon, 6 Prop. Hay's Wf.
U. States, 6 Prop. Bull Wf.
Madagascar, 8 W. M. Smith & Sons
Germany, 16 Butler's Wf., Ld.
France, 23 Girard Brs. & Co.
" 12 H. Johnson & Sons
Straits, 349 Gilman Brs & Co.

Castor Oil—
France, 50 cs. Lon. & Til Ltge. C. & D. Co., Ld
" 15 brls. Lucas & Spencer's Wf., Ld.
Italy, 5 brls. A. Stater & Co.

Caustic Potash—
Germany, 41 dms. J. M. Steel & Co.

Chemicals *(otherwise undescribed*
Holland, £12 Phillips & Graves
U. States, 2 L. & I. D. Jt. Co.
" 430 B. & F. Wf Co., Ld.
Germany, 21 Argo S. S. Co.
Denmark, 19 Bailey & Leetham, Ld.
Germany, 16 Craven & Co.
" 240 L. & I. D. Jt. Co.
Belgium, 130 T Palmer
U. States, 990 S. C. Jones
France, 48 Mory & Co.
" 15 J. Forsey
Germany, 49 Craven & Co.
Belgium, 60 50 pks T. Ronaldson & Co.
Germany, 1,318 A. & M. Zimmermann
Holland, 10 W. Balchin, Ld.
U. States, 16 Pickford & Co
Holland, 50 Hernu. Peron & Co., Ld.
Belgium, 65 T. H. Lee
Germany, 10 Petri Bros.
" 23 Butler's Wf., Ld.
Belgium, 15 Leach & Co.
" 60 John Cockerill Line

Citric Acid—
Germany, 45 pks. A. & M. Zimmermann

Coal Products—
Carbolic Acid
Germany, 25 pks. *J. G. Back*

Copper Sulphate—
Germany, 18 cks. Charles & Fox

Cream of Tartar—
France, 3 cks. H Johnson & Sons
" 5 C. Christopherson & Co
" 20 W. C. Bacon & Co.
Holland, 8 Kirkpatrick, Barr & Co.
Spain, 6 B. & F. Wf. Co., Ld.
France, 20 C. F. Gerhardt

Dyestuffs—
Aniline
Holland 2 cks. J. Barber & Co.
Argols
Italy, 464 pks. B Jacob & Sons
Cape, 2 J. R. Thompson & Co.
Cochineal
Canary Is., 6 bgs. W. M. Smith & Sons
" 12 L. & I. D. Jt. Co.
Cutch
U States, 755 bxs. H. A. Litchfield & Co.
Rangoon, 200 bxs. A. Howden & Co.
" 500 pks. L. & I. D. Jt. Co.
Extracts
U. States 145 brls. L. & I. D. Jt. Co.
France, 25 cks. Beresford & Co.
Belgium, 15 brls. Leach & Co.
France 420 bxs. Netherlands Steamboat Co.
Canada. 165 cks. Boutcher, Mortimore & Co
Gambier
Straits, 235 bls. Prop Hay's Wf.
" 513 958 pks. E. Boustead & Co.
" 749 Adamson, Gilfillan & Co.
" 2,046 894 bgs. Beresford & Co.
" 900 bgs. Brinkmann & Co.
Indigo
E. Indies, 16 chts. L Archard & Co.
" 6 Kaltenbach & Schmitz
" 30 E. Bower & Co.
" 7 J. Kenyon & Sons
" 177 J. W. Cook & Co, Ld.
" 116 Parsons & Keith
" 159 J. Karpeles & Co
" 7 R. Von Glehn & Sons
" 19 M. C. Rimmer
" 27 Croysdale & Co.
" 426 L. & I. D. Jt. Co.
" 15 Dipnall & Co.
" 10 cs. F. A. Hodgkinson & Co.
Myrabolams
E. Indies, 115 bgs. Baxter & Hoare
" 45 J. Graves
" 580 Dalton & Young
" 140 L & I. D. Jt. Co.
" 1'5 Baxter & Hoare
" 70 Culverwell, Brooks & Co.
Saffron
Spain, 1 cs. J. Knill & Co.
Shumac
Italy, 1,000 bgs Beresford & Co,
" 500 W Shelcott & Sons
" 50 Hicks, Nash & Co.
Tanners' Bark
Auckland, 18 t. L. & I. D. Jt. Co.
" 2 Dyster, Nalder & Co.
Natal, 49 A. & W. Nesbitt
" 34 J. T. Rennie, Son & Co.
" 20 Flack, Chandler & Co.
Auckland, 36 Beresford & Co.
" 57 G. H. Penney & Co.
Hong Kong, 2 Union L. Co, Ld.
Adelaide, 44 Baxter & Hoare
Tumeric
China, 34 bgs. R. Warner & Co., Ld.
Valonia
A. Turkey, 30 t. Hicks, Nash & Co.
" 59 T. Pearson & Co.
" 20 Leach & Co.
" 135 Anning & Cobb

Dyestuffs *(otherwise unescribed)*
France, 1 pk. L. C. & D. Rly. Co.
Cyprus, 2 bls. Dunlop Brs. & Co.
France, 81 cks. Burnett Brs. & Sons

Glucose—
Germany, 200 pks. 200 cwt. Trier, Meyer & Co.
Holland, 30 30 J. Barber & Co.
U. States, 200 1,220 Lon. & Til. L. C. & D Co.
" 100 590 J. Keiller & Son, Ld.
" 250 250 Trier, Meyer & Co.
" 50 320 R. Bennett & Co.
" 2,894 10,964 R. G. Hall & Co.
" 100 600 E. & T Pink

Glue—
Germany, £34 M Dk. Co.
" 25 Butler's Wf., Ld.
Holland. 30 Hernu. Peron & Co.
Germany, 75 L. & I. D. Jt. Co.
U. States 130 Armour & Co
France, 130 J. Harrison
U. States, 130 Anglo-Am. Oil Co.
Belgium, 48 Leach & Co.
" 885 T. M. Duche & Sons
U. States, 70 L. & I. D. Jt. Co.
" 14 Pickford & Co.

Glycerine—
Germany, £55 R. W. Greeff & Co.
France, 300 H. Hill & Sons
Holland, 650 J. Barber & Co.

Gutta Percha—
Straits, 948 c. L. & I. D. Jt. Co.
" 198 Gilman Brs. & Co.
" 160 Prop. Bull Wf.
Holland, 206 J. Pest & Co
Auckland, 1,026 L. & I. D. Jt. Co.
" 166 Huttenbach & Co.
" 215 Anderson, Weber & Smith

Lime Acetate—
Germany, £25 R. W. Greeff & Co.
Holland, 34 Petri Brs.

Litharge—
Holland, 8 cks. J. Owen

Manure—
Germany, 150 t. F. W. Berk & Co., Ld
" 179 Schefi-ld, White, & Co.
E Indies, 135 Dundee, Perth, & London S Co.
" 8 7 c. A. Hunter & Co.
" 10 L. & I. D. Jt. Co.

Methyl Alcohol—
Germany, 1,725 g. W. Iszard
France, 4,413 E. Catlin
U. States, 3,800 T. Jones & Co.

Molasses—
U. States, 100 cks. 544 c. W. & W. H Stead
" 425 2,634 J. Forsey
" 524 3,276 J. R. Francis & Co., Ld.
Germany, 365 2,005 G. Hornzee

Ochre—
Italy, 10 cks. A, Slator & Co.
France, 139 W. Harrison & Co.
" 44 pks. Burnett Brs. & Sons
Holland, 26 Phillipps & Graves

Paraffin Wax—
Rangoon, 2,303 bxs. H. Hill & Sons
U. States, 300 cs. Anglo-American Oil Co.

Phosphates—
U. States, 1,706 t. West & Penrose
Holland, 250 "
Belgium, 230 Anglo-Contl. Guano Works

Pitch—
N. Russia, 500 cs. J. Batson & Co
Germany, 154 cks. Fellows, Morton, & Co.
" 58 C. Price & Co.
France, 125 H. Hill & Sons

Potash—
Germany, 40 pks. Butler's Wf, Ld.

Potassium Bicarbonate—
Germany, 22 c. H. Lambert

Potassium Bichromate—
France, 1 ck. W. E. Cole

Potassium Bromide—
Germany, 17 kgs. A. & M. Zimmermann

Potassium Carbonate—
Belgium, 5 t. F. Smith
Germany, 5 J. M. Steel & Co.
" 5 Petri Brs.
" 20 cks. L. & I. D. Jt. Co.

Potassium Muriate—
Germany, 508 bgs. Anglo-Contl. Guano Works

Potassium Oxalate—
Holland, 14 pks. R. W. Greeff & Co.

Potassium Prussiate—
Holland, 37 cks. J. Owen

Pyrites—
Spain, 1,553 t. Anderson, Anderson, & Co.

Pyrogallic Acid—
Germany, 6 pks. R. W. Greeff & Co.

Red Lead—
Holland, 10 cks. J. Owen
" 18 P. Jantzen
" 50 Perkins & Homer
" 12 Randall Brs.
" 10 T. & W. Farmiloe, Ld.
" 50 J. Matton

Rosin—
Belgium, 112 brls. Perkins & Homer
" 130 Phillipps & Graves

Salicylic Acid—
Germany, 10 pks. Butler's Wf., Ld.

Saltpetre—
Germany, 4 cks. L. & I. D. Jt. Co.
" 52 Curtiss & Harvey
" 2 Atkins & Nisbet
E. Indies, 545 bgs. P. & O. S. N. Co.
" 427 Perkins & Homer
Holland, 202 pks. P. Hecker & Co.

Silver Nitrate—
Germany, 1 cs. R. W. Greeff & Co.

Soda—
Holland, 5 t. R. W. Greeff & Co.

Sodium Hypochlorite—
Germany, 325 pks H. Lambert

Sodium Hyposulphite—
Belgium, 19 cks. W. Slimmon

Sodium Nitrate—
Germany, 38 bgs. Burnett Brs. & Sons

Sodium Prussiate—
Belgium, 16 cks. J. Owen

Sodium Sulphide—
Holland, £25 H. Lorenz

Starch—
France, 241 cs. W. E. Cole
" 240 J. Barber & Co.
" 40 W. H. Carey & Sons
Germany, 40 Argo S. S. Co.
" 2,030 Horne & Co.
Belgium, 80 C. Tennant, Sons, & Co.
" 35 C. J. Hunt & Co,
" 101 Seaward Brs., Ld.
" 36 Leach & Co.
" 40 J. Barber & Co.
" 420 T. H. Lee
" 850 E. & T. Pink
" 80 J. Harrison
" 474 T. Ronaldson & Co.
Holland, 179 Hernu, Peron, & Co.
" 80 Phillipps & Graves
" 3,501 Little & Johnston
U. States, 20 brls. Beck & Pollitzer

Stearine—
France, 145 bgs. H. Hill & Sons
" 350 G. Boor & Co.
Belgium, 235 H. Hill & Sons
" 50 D C. Thomas & Sons
" 63 W. M. Mitchell
Holland, 26 cks. Robinson, Roberts, & Co.

Sulphur—
Italy, 1 t. A. Hardtrodt
" 50 A. Taylor
" 20 G. Boor & Co.
" 5 Jessop & Co.
" 2 Murdoch & Co.
" 5 J. Puddy & Co.

Sulphuric Acid—
Germany, 1 pk. H. Lambert

Tallow—
Germany, 58 cks. C. Price & Co.
N. Zealand, 50 Col. Con. & D. Co.
" 99 Anning & Cobb
" 72 J. Greig
" 14 J. Graves
" 278 N. Z. L. & M. A. Co.
U. States, 10 Hoare, Wilson, & Co.
" 14 Hicks, Nash, & Co.
" 300 brls. Price's Pat. Candle Co., Ld.
Queensland, 19 Warrington Laing
" 211 cks. Dalgety & Co.
" 204 Beresford & Co.
Argentine, 300 Phillipps & Graves
France, 10 H. Hill & Sons
Sydney, 35 Lucas & Spencer's Wf.

Melbourne, 150 J. R. Francis & Co.
Belgium, 50 trcs. C. S. Lovell
Holland, 175 "

Tar—
N. Russia, 65 brls. Mordaunt Brs.
" 209 W. Beard & Son
" 555 Linck, Moeller, & Co.

Tartar—
Italy, 34 cks. Howards & Sons
" 29 B. Jacob & Sons

Tartaric Acid—
Holland, 40 pks. Kirkpatrick, Barr, & Co
France, 15 B. & F. Wf. Co., Ld.
" 8 F. C. Devon & Co.
Belgium, 9 "
" 4 B. & F. Wf. Co., Ld.

Ultramarine—
Holland, 6 cs. W. Harrison & Co.
Belgium, 20 cks. H. Kohnstamn
Germany, 7 pks. Argo S. S. Co.

Varnish—
U. States, 34 pks. Lunham & Moore
" 4 C. S. Lovell
" 5 G. Harding & Sons
Germany, 2 Butler's Wf., Ld.
" 6 Brit. Anti-Fouling C. & P. Co.

White Lead—
Holland, 2 cks. J. Owen
" 20 A. & M. Zimmerman
" 80 Randall Brs.
Germany, 14 Taylor Brs.
" 12 H. Lambert
" 25 N. J. Fenner & Co.
" 75 Steinhoff, Sons, & Co.
Holland, 56 brls. T. & M. Farmiloe, Ld.

Wood Pulp—
Sweden, 1,160 pks. Alsing & Co., Ld.
" 120 W. G. Taylor & Co., Ld.
Holland, 25 H. B. Wood
" 218 H. Johnson & Sons
" 1,346 Spicer Brs.
" 480 F. Claydon & Co.
" 1,377 Prprs. Dovegate Dk.
" 4,372 J. Spurling
" 4,467 M. H. Voss
" 481 Fellows, Morton, & Co.
" 98 J. W. Cook & Co., Ld.
" 1,456 Beck & Pollitzer
U. States, 95 "
" 3,038 Henderson, Craig, & Co.
Germany, 500 E. J. & W. Goldsmith
" 300 Tough & Henderson
" 8 J. W. Biggs & Co.
" 480 H. Lambert
" 4 Bailey & Leetham
Norway, 400 W. E. Bott & Co
" 800 J. Sharp
" 325 E. J. & W. Goldsmith
" 640 A. E. Reed & Co

Zinc Chloride—
Holland, 40 tins Hernu, Peron, & Co.

Zinc Oxide—
U. States, 100 brls. M. Ashby, Ld.
Holland, 40 "
" 5 Fellows, Morton, & Co
Germany, 50 cks. W. Balchin, Ld.

Zinc Sulphate—
Sweden, 10 bgs. M. Dk. Co
Germany, 33 cks. F. Smith

Zinc White—
Germany, 40 cks. M. Ashby, Ld.
France, 20 Kerestedji & Co.
" 1 Burnett Brs. & Sons

LIVERPOOL.

Week ending March 23rd.

Acetic Acid—
Rotterdam, 17 bllns.

Aluminium—
New York, 345 bxs. T. Ashbury

Barytes—
Rotterdam, 24 cks.

Bones—
Coquimbo, 40 t.
Valparaiso, 64 bgs.
Boston, 14 brls.

Boracic Acid—
Leghorn, 168 cks.

Borax—
Iquique, 1,750 bgs. 53 brls.

Castor Oil—
Leghorn, 20 cs.

Chemicals *(otherwise undescribed)*
Rotterdam, 2 cs.

Chrome Ore—
Mersyne 550 t.

Colours—
Rotterdam, 3 cks. 11 tubs

Cottonseed Oil—
N Orleans, 925 brls.
New York, 500
Savannah, 1,000
Norfolk, 1,499

Cream of Tartar—
Oporto, 3 cks.
Bordeaux, 66

Dried Blood—
Alexandria, 66 bgs.

Dyestuffs—
Argois
Bordeaux, 4 cks
Cochineal
Gd Canary, 8 bgs. G. S. Bruce
Cutch
Singapore, 533 bxs.
Boston, 318 E. Brownbill & Co.
Extract
Fiume, 770 brls.
Bordeaux, 250 cks.
New York, 100 McArthur & Co.
" 50
Halifax, 110 Boutcher, Mortimore & Co.
Fiume, 600 brls. Oak Extract Co.
" 250 De Cleremont & Donner
Genoa, 250 cs
Fustic
Kingston, 1,396 pcs.
Trieste, qty.
Indigo
Valparaiso, 37 srns. Lazard Brs. & Co.
Shumac
Palermo 100 bgs 100 bls.
Valonia
Smyrna, { 270 t. 320 bgs.
Patras, 633 S. A. Acrotopal
" 309
Trieste, 110

Dyewood Extract—
Philadelphia, 61 brls.
New York, 100 bxs. 30

Farina—
Fiume, 730 bgs.
Hamburg, 30

Glucose—
Newport News, 700 brls.
Baltimore, 200

Glue—
Hamburg, 20 bgs.
Rotterdam, 200 2 bls.
Fiume, 100 Ihler & Sankey
" 100 100 bls.
Genoa, 10 cks.

Guano—
Valparaiso, 1 sk. T. E. Webb

Iodine—
Valparaiso, 2 brls. A. Gibbs
13 kgs. & Sons

Lithopone—
Rotterdam, 60 cks.
Hamburg, 20

Magnesite—
Fiume, 335 pks.

Manganese—
Coquimbo, 984 t.

Manure—
Ghent, 524 bgs.

Molasses—
Alexandria, 999 brls.
N. Orleans, 6,150

Ochre—
Marseilles, 11 cks.

Paraffin Scale—
Baltimore, 100 brls.
New York, 921

Phosphates—
Brunswick, 998 t.
Ghent, 1,000 bgs.

Potash—
Rotterdam, 44 cks.

Pyrites—
Huelva, 7,799 t. Mathieson & Co
" 1,121 H. Bath & Son

Red Lead—
Rotterdam, 29 cks.

Rosin—
Baltimore, 1,617 brls.
Brunswick, 1,000

Saltpetre—
Hamburg, 2 cks. 4 cs 20 kgs.

Soap—
Philadelphia, 400 bxs. Lever Brs., Ld.
Zante 100
Trieste, 12 cs.
Marseilles, 10 E Brooks
" 4 Evans, Gadd & Co.
Boston, 30 Boot's Pure Drug Co.
" 10 W. Foggitt
Naples, 210
Bari, 20

Soap Lyes—
Marseilles, 8 dms.

Soap Stock—
Savannah, 252 brls.

Soapstone—
Bordeaux, 370 bgs. Geo. G. Blackwell, Sons & Co.

Starch—
N'port News, 400 sks.
Hamburg, 160 cs.

Sulphur—
Catania, 260 bgs. 5 brls.

Tallow—
Boston, 240 tcs. 20 hds. 100 brls.
Baltimore, 221

Tar—
Marseilles, 119 cks.
Libau, 139 1 brl.

Tartar—
Bari. 2 cks.

Tartaric Acid—
Marseilles, 35 cks.
Bordeaux, 1 cs.
Rotterdam, 6

Turpentine—
Libau, 3 brls.

Ultramarine—
Rouen, 16 cks.

Varnish—
New York, 20 brls.
Boston, 8 pks. W. H. Staynes & Smith
Rotterdam, 6 cks

White Lead
Antwerp, 25 cks.
Rotterdam, 25

Wood Pulp—
Halifax, 3,103 bls.
Oporto, 1,000
Halifax, 1,000 bdls. Abbott & Co,
Rotterdam, 152 bls. 242 pks.

Zinc Ashes—
Marseilles, 5 cks.

Zinc Oxide—
New York, 200 brls.
Hamburg, 5 cks.

Zinc White—
Rotterdam, 57 cks.

MANCHESTER.

Week ending March 25th.

Alizarine—
Rotterdam, 20 cks.

Barytes—
Antwerp, 110 bgs.

Caustic Lye—
Hamburg, 20 dms.

Chemicals *(otherwise undescribed)*
Antwerp, 2 cks.
Rotterdam, 1 carb.

Coal Products—
Aniline Salt
Rotterdam, 4 cks.
Tar
Libau, 2 brls.

Colours—
Antwerp, 26 cks.
Hamburg, 23 11 cs.
Rotterdam, { 138 25 13 bxs. 143 brls.

Dyestuffs—
Shumac
Palermo, 325 bgs. 540 bls.

Farina—
Hamburg, 100 kgs.
Rotterdam, 100 bgs.

Glue—
Antwerp, 10 cks. 90 bls.
Hamburg, 20 bgs.
Rotterdam, 175 20 cs.

Glycerine—
Antwerp, 3 cks.

Lithopone—
Rotterdam, 6 cks.

Potassium Carbonate—
Hamburg, 70 cks.

Sodium Chlorate—
Gothenburg, 20 kgs. Felber, Jucker, & Co.

Sodium Sulphate
Antwerp, 18 pks.

Starch—
Antwerp, 750 cs.
Hamburg, 132
Rotterdam, 222

Stearine—
Antwerp. 7 bgs.
Rotterdam, 120 bls.

Tannic Acid—
Hamburg, 9 pks.

Tartar—
Rotterdam, 2 cks.

Tartar Emetic—
Hamburg, 20 cks.

Tartaric Acid—
Antwerp, 4 cks.
Rotterdam. { 30 kgs. 7 cks.

Wood Pulp—
Christiania, 300 bls. W. H. Stott & Co.
" 3,801 W. H. Ingram
Drammen. 200 15 cs. "
Gothenburg, 3,317 Felber, Jucker, & Co.
Hamburg, 380 pks.
Risor, 1,047 W. H. Ingram

Zinc Oxide—
Antwerp, 17 cks.
Rotterdam, 40 brls.

HULL.

Week ending March 25th.

Acids—
Bari, 27 cks. Wilson, Sons, & Co., Ld.
Rotterdam, 8 Hull & Netherlands S. S. Co

Alizarine—
Rotterdam, 128 pks. Hull & Netherlands S. S. Co.

Antimony—
Hamburg, 10 cs. Wilson, Sons, & Co., Ld.

Barytes—
Amsterdam, 120 cks. Hull & Netherlands S. S. Co.
Antwerp, 17 Bailey & Leetham, Ld.
" 73 H. F. Pudsey

Bones—
Trieste, 49 pks. Wilson, Sons, & Co., Ld.

Castor Oil—
Leghorn, 40 cs. Wilson, Sons, & Co., Ld.
Marseilles, 29 brls.

Chemicals *(otherwise undescribed)*
Antwerp, { 10 dms. 80 pks. 4 cks. Wilson, Sons, & Co., Ld.
" 1 Bailey & Leetham, Ld.
Hamburg, 10 Wilson, Sons, & Co., Ld.
Rotterdam, 1 cs. Hull & Netherlands S. S. Co.
Stettin, 2 cks. Wilson, Sons, & Co., Ld.
" 9

Coal Products—
Aniline
Rotterdam, 42 brls. 112 pks. Hull & Netherlands S. S. Co.
Carbolic Acid
Antwerp, 11 pks. Major & Co.
Creosote Salts
Rotterdam, 27 cks. Hull & Netherlands S. S. Co.
Pitch
Rotterdam, 44 cks. Hull & Netherlands S. S. Co.

Colours—
Amsterdam, 3 cks. Hull & Netherlands S. S. Co,
Antwerp, 49 pks. 19 cks. Wilson, Sons, & Co., Ld.
Bremen, 2 pks. "
Fiume, 70 bgs.
Ghent, 30 cks. "

Hamburg, 10 ,,
,, 7 pks.
New York, 20 brls.
Rotterdam, 25 pks. Hull & Netherlands S S. Co.

Dyestuffs—
Extracts
Dunkirk, 9 cks.
Fiume, 105 brls.
Ghent, 10
Rouen, 14 cks. Wilson, Sons, & Co., Ld.
Trieste, 5 brls. ,,
Indigo
Rotterdam, 1 brl. Hull & Netherlands S. S. Co.
Myrabolams
Bombay, 21,755 bgs. 1,849 pkts.
Shumac
Palermo, 718 bgs.
,, 708 Wilson, Sons, & Co., Ld.
Trieste, 20 ,,

Farina—
Hamburg, 150 bgs.
Harlingen, 200 bls. Wilson, Sons, & Co., Ld.
Stettin, 108 bgs. ,,

Glucose—
New York, 250 bgs. / 799 brls.

Glue—
Antwerp, 4 bls. Wilson, Sons, & Co., Ld.
Dunkirk, 20 cks. ,,
Fiume, 100 bgs.
Hamburg, 5 ,,
New York, 50 cs.
Rouen, 19 pks. ,,

Lead Acetate—
Rotterdam, 2 cks. Hull & Netherlands S. S. Co.
10 cs.

Linseed Oil—
Amsterdam, 100 brls. Hull & Netherlands S. S. Co.

Manure—
Bombay, 3,201 bgs.
Kurrachee, 5,000

Ochre—
Rouen, 20 cks. Wilson, Sons, & Co., Ld.

Phosphates—
Dunkirk, 2,875 bgs
Pensacola, 591 t.

Potash—
Dunkirk, 51 cks. Wilson, Sons, & Co., Ld.

Saltpetre—
Antwerp, 135 bgs. Wilson, Sons, & Co., Ld.
Hamburg, 50 ,,

Soap—
New York, 1 bx. Wilson, Sons, & Co., Ld.
Marseilles, 3 cs.

Soda—
Antwerp, 202 bgs. Wilson, Sons, & Co., Ld.

Starch—
Amsterdam, 260 cs. Hull & Netherlands S. S. Co.
Antwerp, 92 Wilson, Sons, & Co., Ld.
,, 30
Bremen, 2,066 pks. Veltmann & Co.
Dunkirk, 20 bgs.
Ghent, 164 cs. Wilson, Sons, & Co., Ld.

Sulphur—
Catania, 640 bgs. Wilson, 6 brls. Sons, & Co., Ld.
,, 850 bgs. / 98 cks. / 50 t.

Sulphuric Acid—
Hamburg, 97 cks.

Tallow—
Dunkirk, 306 cks. Wilson, Sons, & Co., Ld.
New York, 100 trcs.

Tartar—
Bordeaux, 1 ck.

Ultramarine—
Bremen, 20 cks. Sissons Brs. & Co.
,, 43 pks.

Varnish—
Antwerp, 8 pks.

Waste Salt—
Hamburg, 1,385 bgs.
,, 528 Bailey & Leetham, Ld.
50 t.

White Lead—
Antwerp, 38 cks. Bailey & Leetham, Ld.
Rotterdam, 25 Hull & Netherlands S S. Co.

Wood Pulp—
Antwerp, 52 bls. Wilson, Sons, & Co., Ld.
Christiania, 1,545 ,,
Drontheim, 80 ,,
Gothenburg, 2,979 ,,

Zinc Oxide—
Antwerp, 50 cks. Bailey & Leetham, Ld.

Zinc White—
Hamburg, 8 cks.

GLASGOW.

Week ending March 30th.

Ammonium Nitrate—
Antwerp, 32 cks.

Barytes Sulphate—
Rotterdam, 40 bgs. J. Rankine & Son
Antwerp, 300
Hamburg, 20

Bleaching Powder—
Rotterdam, 40 cks. J. Rankine & Son

Castor Oil—
Antwerp, 20 cks.

Chemicals *(otherwise undescribed)*
Hamburg, 3 cs.

Coal Products—
Alizarine
Rotterdam, 13 cks. J. Rankine
6 brls. & Son
Aniline
Rotterdam, 4 cks. 9 cs. J. Rankine & Son

Cutch—
Boston, 71 bxs.

Dyewood Extracts—
New York, 6 brls.
Fiume, 135 brls. G. Dickson
,, 204

Farina—
Delfszyhl, 150 bgs. J. Rankine & Son

Glucose—
New York, 1,447 brls.
Portland, M., 75
Baltimore, 300
St. John, N. B., 1,150

Glue—
Rotterdam, 2 bgs. J. Rankine & Son
Fiume, 100
Antwerp, 12 cks.
Hamburg, 20 bgs.

Indigo—
Rotterdam, 12 cks. J. Rankine & Son

Lead Acetate—
Hamburg, 20 cks.

Litharge—
Rotterdam, 2 cks. J. Rankine & Son

Manganese Chloride—
Rotterdam, 8 cks. J. Rankine & Son

Minium—
Rotterdam, 3 cks. J. Rankine & Son

Oxalic Acid—
Rotterdam, 5 cks. J. Rankine & Son

Paint—
Philadelphia, 10 brls. 5 cs.
Boston, 20
New York, 227 kgs.

Painters' Colours—
Antwerp, 2 cks.
Rotterdam, 7 bxs. J. Rankine
2 cks. 42 brls. & Son
Hamburg, 11 cks. 11 pks.

Paraffin Scale—
New York, 330 brls.

Phosphate Rock—
Antwerp, 3,500 bgs.

Potash—
Rotterdam, 30 cks. J. Rankine & Son
Hamburg, 90 45 dms.

Rosin—
New York, 250 brls.

Soap—
Fiume, 34 cs. Buchannan Bros. & M'Intyre
Baltimore, 1,058 brls.
New York, 2,500 bxs.
Rotterdam 100 cs. J. Rankine & Son

Starch—
Fiume, 20 bgs. Gilmour & Co.
Baltimore, 1,490
St. John, N.B., 125
Rotterdam, 20 J. Rankine & Son
Antwerp, 20 234 cs.

Stearine—
New York, 16 hhds.
Amsterdam, 61 bgs.

Talc—
New York, 200 bgs.

Tallow—
Philadelphia, 360 tcs.

Tannic Acid—
Hamburg, 2 cks.

Varnish—
New York, 15 brls. 1 cs.

Waste Salt—
Hamburg, 201 t. 79 cks. 500 bgs.

White Lead—
Rotterdam, 36 cks. J. Rankine
156 pks. & Son

Wood Pulp—
New York, 770 pcs.
Portland, 119 pks.
Rotterdam, 25 bls. J. Rankine & Son
Drammen, 1,640 28 cs.

Zinc Oxide—
Rotterdam, 25 cks. J. Rankine & Son
Antwerp, 12

Zinc White—
Rotterdam, 25 cks. J. Rankine & Son

TYNE.

Week ending March 25th.

Barytes—
Antwerp, 100 bgs. Tyne S. S. Co.
Rotterdam, 466

Colours—
Rotterdam, 2 cks. Tyne S. S. Co.

Manganese—
Hamburg, 10 cs. Tyne S. S. Co.

Manganese Ore—
Hamburg, 1 ck. Tyne
250 bgs. S. S. Co.

Paint—
Christiania, 4 cs.

Soap—
Rotterdam, 40 bxs. Tyne
7 cs. S. S. Co.

Starch—
Antwerp, 200 cs. Tyne S. S. Co.
Rotterdam, 126 ,,

Tartaric Acid—
Rotterdam, 10 cks. Tyne S. S.

White Lead—
Antwerp, 20 cks. Tyne S. S.

Wood Pulp—
Rotterdam, 52 bls. Tyne S. S.

GOOLE.

Week ending March 22nd.

Alkali—
Calais, 16 cks.

Antimony—
Boulogne, 1 cs.

Caoutchouc—
Boulogne, 5 cks.

Coal Products—
Alizarine
Rotterdam, 11 cks. 6 cs.
Aniline
Hamburg, 2 cks. 1 cs.
Rotterdam, 132 26

Colours—
Hamburg, 20 cks. 1 cs.

Dyestuffs *(otherwise undes.)—*
Amsterdam, 3 cks.
Boulogne, 6 66 pks.
Ghent, 5 cs.
Rotterdam, 270 50

Farina—
Delfszyhl, 660 bgs.
Hamburg, 300

Glue—
Antwerp, 5 cks.

Plumbago—
Boulogne, 1 ck.

Potash—
Calais, 19 dms.
Hamburg, 9

Saltpetre—
Antwerp, 170 bgs.
Rotterdam, 100

Sodium Silicate—
Rotterdam, 12 cks.

Starch—
Ghent, 140 cs.

Tartar—
Antwerp, 3 cs.

Waste Salt—
Hamburg, 550 cks.

GRIMSBY.

Week ending March 25th.

Barytes—
Hamburg, 40 cks.

Caoutchouc—
Hamburg, 3 cs.
Rotterdam, 1

Chemicals *(otherwise undescribed)*
Hamburg, 2 cks.

Colours—
Antwerp, 56 pks.
Hamburg, 74 cks. 102 / 20 cs.
Rotterdam, 3 2 / 100 bgs.

Dyestuffs *(otherwise undescribed)*
Dieppe, 5 cks.

Dyestuffs—
Indigo
Antwerp, 2 cks.

Glue—
Dieppe, 10 bs.

Plumbago—
Hamburg, 6 cks.

Salt—
Hamburg, 731 bgs.

Starch—
Antwerp, 112 cs.

Wolfram Ore—
Hamburg, 10 cs.

Zinc Ashes—
Hamburg, 4 cs.

EXPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending March 29th.

Acetic Acid—
Cape Town, 7 c. £11

Acids—
Madras, 1 cs. £15

Alkali—
Santos, 21 t. 19 c. £176
Honolulu, 7 22

Alum—
Robat, 5 t. 13 c. £

Alum Waste—
Calcutta, 39 t. 10 c. £96

Ammonia—
Coquimbo, 2 c. £15
Adelaide, 8 cks. 11

Ammonia (Anhydrous)—
Cologne, 40 cyldrs. £275

Ammonium Carbonate—
Brisbane, 1 t. £33
Libau, 10 c. 13
Adelaide, 6 11
Stettin, 1 4 28
Sydney, 1 30
New York, 162 cks. 553
M. Video, 10 cs. 15

Ammonium Chlorate—
Rio de Janeiro, 18 c. £24

Ammonium Muriate—
Melbourne, 1 t. 3 c. £19

Ammonium Sulphate—
Antwerp, 214 t. £2354
Berbice 25 266
Rotterdam, 50 525
Dunkirk, 20 215
Honolulu, 100 1,014
Ghent, 30 315
Bremen, 312 3,361
Hamburg, 80 850
Martinique, 202 2 212

Arsenic—
Boston, 140 cks. £450

Barium Nitrate—
New York, 3 t. 13 c. £65

Bone Dust—
Martinique, 15 t. £60

Borax—
Adelaide, 2 t. 2 c. £34
Fremantle, 5 8
Melbourne, 3 2 60

Caustic Soda—
E. London, 1 t. £24
Hiogo, 30 240

Chemicals *(otherwise undescribed)*
Cape Town, 4 cks. £16
Lyttelton, 6 c. 45
Fremantle, 3 cs. 9 pks. 33
Karachi, 48 27
Beira, 23 54
Singapore, 20 21
Valparaiso, 3 21
Barbadoes, 3 13
B. Ayres, 56 46
Hamburg, 6 5 kgs. 205
Antwerp, 25 50
San Francisco, 1 t. 5 c. 35
Vancouver, 1 350
Adelaide, 4 cs. 11
Aden, 5 ph. 17
Boston 10 cks. 25
Philadelphia, 30 21
Lisbon, 16 32
Melbourne, { 4 34 164 / 1 t. 1 c.
Dunkirk, 49 2 5 0
St. John, N.B., 13 14
Reval, 1 13 20 kgs. 128
New York, 54 13 938

Citric Acid—
Seville, 1 t. £138
Reval, 3 cks. 105
Libau, 5 kgs. 31
Brussels, 10 c 60

Coal Products—

Alizarine
Reval, 2 cs. £60
Boston, 9 cks. 123

Anthracene
Rotterdam, 420 cks £580

Benzol
Hamburg, 3 cks. £11
Cologne, 78 169

Carbolic Acid
Boston, 176 cks. £1,356
San Francisco, 10 93
Cologne, 73 320

Creosote
Bayonne, 2,785 cks. £1,960

Creosote Oil
Brest, 832 brls. £700

Cresol
Philadelphia, 76 cks. £151

Dyes
Philadelphia, 3 cks. £73

Naphtha
Melbourne, 50 cs. £100
Wellington, 20 dms. 8

Naphthaline
New York, 260 cks. £221

Paraffin Wax
Reval, 2 cs. £8

Pitch
Hamburg, 24 cks. £81
Newcastle, 10 brls. 10
Rotterdam, 60 53
Wellington, 9 7 pks. 8
Amsterdam, 723 t. 877
Cette, (in bulk) 1,855
Antwerp, 1,578 1,854
Townsville, 521 703

Pitch Oil
Hamburg, 27 cks. £91

Pyridine
Cologne, 35 cks. £365

Pyridine Bases
Konigsberg, 6 dms. £138

Tar
Bombay, 84 mlts. £69
Hamburg, 250 brls. 103
Raumo, 1,000 1,129
Sourabaya, 50 33
Melbourne, 5 25 dms. 12
Wellington, 4 50 16
Natal, 50 9
Pt. Elizabeth, 200 6
Honolulu, 200 128

Tar Oil
Marseilles, 6 cks. £9

Tar Salts
Brussels, 1 ck. £13

Copper Oxide—
Piræus, 10 c. £31

Copper Sulphate—
Treport, 16 t. 10 c. £310
Genoa 30 734
Bordeaux, 34 10 827

Cream of Tartar—
Auckland, 1 t. 1 c. £85

Disinfectants—
Algoa Bay, 425 dms. £60
Cape Town, 40 48
Natal, 16 cs. 40
Mauritius, 64 70

Hydrochloric Acid—
Coquimbo, 2 c. £8

Manure—
Antigua, 20 t. 1 c. £217
Mauritius, 25 200
Morlaix, 121 625
Auckland, 79 257
Calcutta, 1 12 11
Demerara, 184 13 1,818
Sanderneau, 349 2,200
Martinique, 365 1,700

Nitric Acid—
Jersey, 14 crbys. £28
Coquimbo, 3 c. 14

Oxalic Acid—
Adelaide, 13 c. £18
Melbourne, 4 cks. 29

Phosphorus—
Melbourne, 4 c. £35
Invercargill, 5 52

Potassium Bichromate—
Calcutta, 3 c. £7

Potassium Carbonate—
Adelaide, 13 c. £9

Potassium Chlorate—
Calcutta, 1 t. £32
Wellington, 1 8 c. 45

Potassium Cyanide—
Hiogo, 30 cs. £83
N. Orleans, 100 612
Tampico, 102 587
Algoa Bay, 1 t. 10 c. 158
Natal, 3 13
Sydney, 2 220
Melbourne, 14 75
Singapore, 1 10 150

Potassium Prussiate—
Adelaide, 3 c. £10
Yokohama, 1 t. 67

Sal-ammoniac—
Adelaide, 11 c. £16

Salicylic Acid—
Auckland, 2 c. £21

Saltpetre—
Sydney, 5 t. £109
Santos, 1 19 c. 47
Bahia, 2 26 57

Sheep Dip—
Cape Town, 200 cs. £250
Melbourne, 100 dms. 61
Sydney, 13 t. 100 361
E. London, 500 625
San Francisco, 250
Durban, 500 625
Mossel Bay, 200 250

Silver Nitrate—
Adelaide, 4 pks. £39

Soap Lyes—
Hamburg, 10 c. £15
New York, 5 t. 1 130

Sodium Bicarbonate—
Ghent, 6 c. £11

Sodium Carbonate—
Auckland, 1 t. £19

Sodium Nitrate—
Fremantle, 1 cs. £10

Sodium Oxalate—
New York, 8 c. £22

Strontium Nitrate—
New York, 4 t. 16 c. £117

Sulphur—
Philadelphia, 2 t. 10 c. £80

Sulphuric Acid—
Algoa Bay, 1 t. 19 c. £14

Tartaric Acid—
Boulogne, 5 c. £29
Hiogo, 20 kgs. 112
Fremantle, 15 84
Adelaide, 5 29

LIVERPOOL

Week ending March 29th.

Acetic Acid—
Copenhagen, 1 t. 5 c. £26

Alum—
Malaga, 2 t 2 c. 3 q. £10
Vigo, 1 13 2 9
Galatz, 1 1 5
Oporto, 12 7 61
Adelaide, 2 11
Piræus, 4 2 19

Aluminous Cake—
Calcutta, 25 t. 2 c. £85

Ammonium Carbonate—
Naples, 1 t. 15 c. £44
Lisbon, 16 20
Rangoon, 2 4
New York, 15 18

Ammonium Muriate—
Marseilles, 5 c. £5
Genoa, 10 9

Ammonium Sulphate—
Gd. Canary, 35 t. £386
Cullera, 110 1,025
Rotterdam, 5 52
Las Palmas, 5 54
Venice, 10 94
Genoa, 27 10 c. 278
Newport News, 142 11 1,500
Valencia, 531 2 2 q. 5,053
Malaga, 49 539
Philadelphia, 125 12 1 1,332
Palermo, 15 3 167
Messina, 7 5 80

Amorph. Phosph rus—
Havana, 6 cs. £72

Arsenic—
Vigo, 4 c. £5
B. Ayres, 17 t. 1 298

Basic Slag—
Montserrat, 15 t. 2 c. £28

Bleaching Powder—
Alicante, 6 cks.
Baltimore, 68
Barcelona, 15
Bilbao, 94
Boston, 410
Dayton, 18
E. St. Louis, 15 cs.
Everett, 78
Genoa, 6
Hamburg, 6
Leghorn, 16
Lisbon, 44
Miamisburg, 17
Middleton, 25
Milwaukee, 87
Muncie, 69
Naples, 121
Rouen, 24
Tampico, 9 brls.
Venice, 28

Bones—
Montserrat, 10 t. 5 c. £59

Boracic Acid—
Dusseldorf, 2 c. £3

Borax—
Havana, 11 c. £9
Boksburg, 2 t. 32
Braila, 2 2
Johannesburg, 5 4
Melbourne, 1 10 24
St. John, 1 1 3 q. 17
Maastricht, 20 1 2 321
Hamburg, 5 85
Dusseldorf, 8 7
Christiania, 6 5
Natal, 1 14
Adelaide, 1 14
Chicago, 2 2 72
Pt Natal, 30 cks. 66

Calcium Chloride—
Odessa, 40 t. 2 c. £84
Bilbao, 1 19 1 q. 6
Brisbane, 5 1 11

Carbolic Acid—
Barcelona, 1 t. 8 c. 3 q. £90
Odessa, 14 2 53
Fiume, 10 cks. 33
St. Louis, 9 19 628

Carbon Bisulphide—
Panama, 1 c. 2 q. £13

Caustic Potash—
E. St. Louis, 1 t. 15 c. £4

Caustic Soda—
Adelaide, 90 dms.
Amsterdam, 166
Barcelona, 300
Bilbao, 27 brls.
Bombay, 30
Braila, 18
Brisbane, 14
B. Ayres, 158
Callao, 40
Catania, 52
Corinto, 14
Curityba, 20
E. St. Louis, 25 10 cs. 10
Fiume, 15
Galatz, 142
Genoa, 257
Gijon, 25
Guttierrez, 76
Hamburg, 62
Havana, 40
Leghorn, 6
Limassol, 10
Lisbon, 15
Malaga 15
Melbourne, 251 37 pks. 6
M. Video 150
Naples, 30
Newcastle, 72
N. Orleans, 50
New York, 450
Odessa, 100
Oporto, 60
Philadelphia, 50
Piræus, 15
Pisco, 30
Porto Alegre, 27
Progresso, 25
Puerto Cabello, 15
Rangoon, 35
Reval, 99 cks.
Rio de Janeiro 20
St. John, N.B., 50
San Juan, P.R., 8
Santa Catharina, 20 cs.
Sarnia, 40
Seville, 452
Sourabaya, 500
Sydney, 58
Tampico, 12
Tarragona, 6 26 brls. 25 cks.
Trieste, 44
Trinidad, 60
Tunis, 10
Valencia, 75
Valparaiso, 125
Vera Cruz, 120
Vigo, 15
Volo, 190
Yokohama, 190

Chemicals *(otherwise undescribed)*
Rio de Janeiro, 4 t. 1 c. £40
Hamburg, 1 28
Bilbao, 5 3 q. 127
Madras, 1 3 5
Odessa, 7 10 1 190

China Clay—
Bilbao, 200 bgs.
Boston, 1,001 cks.
Genoa, 40

Lisbon, 150
Naples, 80 300
Newport News, 224
Penedo, 12
Portland, M., 440
Ranegungo, 140
Rio de Janeiro, 65
Vera Cruz, 10

Chloride Lime—
Pernambuco, 14 c 3 q. £5

Coal Produc s—
Aniline Colour
Bombay, 2 cs.
New York, 2 cks.
Aniline Dye
Barcelona, 16 cks.
Aniline Oil
Philadelphia, 20 dms.
Genoa, 1
Aniline Salt
Genoa, 10 brls.
Piræus, 15
Creosote Oil
Bordeaux, 296 cks.
Lisbon, 100 brls.
Naphtbaline
Philadelphia, 198 bgs.
Pitch
Cette, 361 t. 16 c.
Galatz, 25 cks.
Ibrail, 30 brls.
Karachi, 10
Lagos, 5
Tar
Ibrail, 95 brls.
Karachi, 5 rlts. 10
Kustendjie, 20
Para, 130 dms.

Cobalt Oxide—
Antwerp, 1 c. 2 q. £100

Copperas—
Calcutta, 13 t. 16 c. £25

Copper Sulphate—
Rouen, 64 t. 3 c. £1,183
Leghorn, 38 17 693
Valparaiso, 14 19 3 q. 345
Galatz, 21 4 343
Lisbon, 30 3 624
Ancona, 10 1 202
Naples, 76 3 1,538
Bari, 24 17 2 483
Genoa, 36 18 1 725
Brindisi, 30 17 3 533
Venice, 94 13 3 1,789
Odessa, 29 18 2 524
Bordeaux, 175 19 3 3,343
Piræus, 5 13 118
Patras, 7 4 3 164
Vigo, 18 12 1 396
Trieste, 27 527
Madras, 2 50

Cream of Tartar—
Vera Cruz, 8 c. £40

Disinfectants—
Rangoon, 4 cs. 1 t. 6 c. 3 q. £58

Dried Blood—
Las Palmas, 3 t. £24

Guano —
Valencia, 6 t. 15 c. £50

Iron Oxide—
Rouen, 3 t. 9 c. £16

Magnesia —
Malaga, 8 cs.

Manure—
Teneriffe, 20 t. £120
Valencia, 75 1 c. 3 q. 150
Antwerp, 6 17 3 31
Gd. Canary, 20 143
Genoa, 7 3 20

Paint—
Bombay, 38 dms.
Cadiz, 20
Campana, 40 kgs.
C Coast Castle, 23 11
Cienfuegos, 1 ck.
Constantinople, 100
Curacao, 35 12 cks.
Genoa, 21 pks. 62
Hamburg, 27 kgs. 1
Havana, 50 9 26
Ibrail, 10
Karachi, 105
Kingston, Ja., 2
Lagos, 3
Manaos, 89 cs.
Matanzas, 9
M. Video, 40
San Juan, 14
Sierra Leone, 1 brl. 107
Singapore, 8 2 cks.

Painters' Colours—
Algoa Bay, 28 pks.
Boston, 330
B. Ayres, 12 kgs. 53 brls. 17 cs.
Calcutta, 3 cks. 7
Callao, 26
Guyaba, 25 brls.
Havana, 5 tcs. 2
Lagos, 17 kgs. 3 cs. 76¼ dms.
Limon, 250
Madras, 7
M. Video, 10 20 19 brls. 20 crts.
Para, 54 20 3 cks. 25 dms.
Pernambuco, 32
Piræus, 3
Salaora, 1
Sydney, 100 kgs. 40 cs.
Valparaiso 110

Paraffin Wax—
Barcelona, 40 bgs.
Vera Cruz, 30

Phosphates—
Nantes, 11 t. 9 c. 1 q. £50

Phosphorus—
B. Ayres, 12 c. 2 q. £84
M. Video, 6 42
Havana, 2 cs. 19

Potash—
B. Ayres, 8 c. 2 q. £5
Campana, 15 17

Potassium Bichromate—
Smyrna, 2 t. 3 q. £66

Potassium Carbonate—
Corunna, 7 c. £9
New York, 9 t. 6 163

Potassium Chlorate—
Copenhagen, 3 t. £90
Hamburg, 5 132
Havana. 14 cks. 99
Hong Kong, 1 t. 30
Montreal. 1 c. 8
New York, 7 10 225
Odessa, 1 31
Rotterdam, 5 161
Rosario, 5 10
Vera Cruz, 1 30

Potassium Iodide—
Rangoon, 1 cs. £100

Potassium Prussiate—
Fiume, 2 c. £7
Genoa, 10 cks. 147
Vera Cruz, 2 t. 110

Salammoniac—
Barcelona, 1 t. 14 c. £10
Corunna, 6 10
Genoa, 15 24
Smyrna, 3 15 1 q. 118
Trieste, 1 33

Salt—
Anamaboe, 1,000 kgs.
Antwerp, 225 t.
Baltimore, 745
Batanga, 40
Benin, 500 bgs.
Boston, 100 t. 500 sks.
Brass, 100 bgs.
Brisbane, 25 t.
Cameroons, 123 10 c.
C. C. Castle, 112 17
Cape Palmas, 7 10
Cape Town, 50
Carlton, 75
Chicago, 200
Conakry, 45 1
Degama, 100
Gd. Bassa, 8 10
Halifax, 5
Hamburg, 103 14
Havana, 117 17
Isles de Los, 10
Lagos, 100
Lahou, 12 10
Manaos, 218 15
Manoh, 23 8
Matanzas, 50
Montreal, 100
N. Orleans, 115
Puget Sounn, 332 2
Rio Del Rey, 20
St. John, N.B., 483 5
Salt Pond, 36 3
Santiago de Cuba, 10
Sapeli 8
Sherbro, 210 14
Sydney, 205
Trinidad, 42 8
Vancouver, 395
Victoria, B. C., 30
Warri, 200 bgs.

Salt Cake—
Antwerp, 120 t. £155
Naples, 4 16 c. 7
Terneuzen, 150 235

Saltpetre—
Maceio, 19 c. £20

Sheep Dip—
B. Ayres, 5 t. £200
Detroit, 6 8 c. 220
M. Video, 8 18 1 q. 250
Natal, 1 6 3 cs. 116
Pt. Natal, 50 88

Soap—
Aachen, 30 cs.
Aden, 50 bdls.
Amboina, 500 bxs.
Algoa Bay, 1,000 275 13
Antwerp, 28
Barbadoes, 101 pks.
Bombay, 22 490
Boston, 20 8
B. Ayres, 36 dms.
Caballo Cocha, 2
Calcutta, 50 15 500 bdls.
C. C. Castle, 351 2
Cape Town, 1,900
Chama, 262
Conakry, 160
Constantinople, 6 brls.
Copenhagen, 40
Delagoa Bay, 10
Dunkirk, 40
E. London, 100
Forcados, 10 cs.
Genoa, 20
Gd. Bassa, 47
Halifax, 334
Hamburg, 50
Havana, 141 1
Islandia, 2
Johan'esburg, 1,285 32
Jubia, 38 kgs.
Karachi, 1
Kimberley, 10
Kotonou, 40 bxs.
Kingston, Jam., 1,600
Lady Smith, 6
Lagos, 94 2
Las Palmas, 95
Madras, 10 31
Malta, 130
Manaos, 600
Matanzas, 24
Mauritius, 1
New York, 65
Para, 500 200
Pt. Elizabeth, 1,525
Pt. Natal, 60
Pretoria, 160
Rangoon, 5 9
Reunion, 500
Rotterdam, 385 164 dms.
St. John, N.B., 25
St. John's, N'fd., 52
St Thomas, 1,000
Salt Pond 50
Sierra Leone, 136 5
Singapore, 270
Tangiers, 11 3
Teneriffe, 834
Trieste, 4
Warri, 600

Soap Lyes—
Rotterdam, 83 t. 10 c. £2,341

Soda Ash—
Adelaide, 117 cks.
Amsterdam, 1,000 bgs.
Antwerp, 2,150
Baltimore, 800
Barcelona, 51
Bilbao, 100
Boston, 36
Brisbane, 40 kgs. 305
B. Ayres, 100
Calcutta, 270 100
Fiume, 105 bgs.
Genoa, 600
Gothenburg, 25
Havana, 2 tcs.
Kobe, 119
Lagos, 20 kgs.
Launceston, 20
Leghorn, 120 bgs.
Melbourne, 351
M. Video, 50 brls.
Naples, 34
Newport News, 400
New York, 35 dms.
Oporto, 20 cks.
Philadelphia, 1,460 93 tcs.
Rio de Janeiro, 25 bxs. 25
Smyrna, 100 bgs.
Sydney, 168
Syra, 100 brls.
Talcahuano, 20
Tampico. 200 10
Townsville, 20
Turin, 100
Valparaiso, 25
Venice, 400 48
Yokohama, 130

Soda Crystals—
Gibraltar, 30 kgs.
Kingston, Jam., 10 cks.
Philadelphia, 280
Piræus, 20 brls.
Valparaiso, 150
Vancouver, 50 bgs.

Sodium Acetate—
Vera Cruz, 2 cks.

Sodium Bicarbonate—
Adelaide, 85 kgs. 70 bgs.
Algoa Bay, 40
Bilbao, 120 brls.
Bombay, 211 20
Barcelona, 330
Bordeaux, 10 dms.
Bourgas, 58
Brisbane, 480
B. Ayres, 20 5 cks.
Calcutta, 260
Constantinople, 60
Fairwater, 150
Galatz, 40
Genoa, 50 10
Gothenburg, 20
Halifax, 80 pks.
Hong Kong, 10
Johannesburg, 24
Launceston, 20 4 cks.
Madras, 50
Malaga, 75
Maryborough, 40
Melbourne, 270 100 bgs.
Naples, 60
Newcastle, 134
Newfairwater, 270
Panama, 5 cs.
Pt. Elizabeth, 20
Rangoon, 120
Rio de Janeiro, 7
Rouen, 75 20 15 cks.
St. John, N.B., 200
Singapore, 10
Sydney, 390 35 100 bgs.
Talcahuano, 50
Townsville, 300 75
Varna, 50
Venice, 50
Vera Cruz, 20
Yokohama, 300

Sodium Carbonate—
Amsterdam, 21 bls.
Brisbane, 50 kgs.
Calcutta, 28 brls.

Sodium Chlorate—
Reval, 100 kgs.
Vera Cruz, 1 2 cks.

Sodium Hyposulphite—
Callao, 266 kgs.

Sodium Silicate—
Rio de Janeiro, 10 brls.

Sulphur—
Calcutta, 9 t. £4

Sulphuric Acid—
Kingston, 1 t. 3 c. £
Maceio, 10 cs. 4

Superphosphates—
Genoa. 19 t. 14 c. £4
Las Palmas. 27 12
St. John's, N'fd., 1

Tartaric Acid—
New York, 1 t. £21

Varnish —
Alexandria, 1 cs.
Algoa Bay, 2
Antwerp, 4 cks.
Genoa, 3
Hamburg, 1 dm.
Lagos, 2
Madras, 3
Naples, 3
Ottawa. 1
Santander, 5
Sydney, 6
Vera Cruz, 1

Venetian Red—
Galatz, 100 kgs.
Gothenburg, 130 bgs. 25 cks.
Hamburg. 30
Newport News, 100 brls.
Oporto. 146

Verdigris—
Mulhouse, 8 c. £2

White Lead—
Portland, Me., 33 cks.

Zinc Chloride—
Bombay, 3 t. £15

Zinc White—
Rouen, 2 t. 12 c. £4

MANCHESTER.

Week ending March 29th.

Ammonium Carbonate—
Pictou, 10 kgs.
Bleaching Powder—
Sherbrooke, 95 cks.
Bones—
Frie-hateau, 135 bgs.
Castor Oil—
St. John, N.B., 41 cks.
Chemicals *(otherwise undescribed)*
St. John, N.B., 35 brls.
Coal Products—
Aniline Colours
Germany, 13 kgs. 5 cs.
Gothenburg, 2
Aniline Oil
Belgium, 5 cks. 4 dms.
Germany, 10
Aniline Salt
Germany, 2 cks.
Gothenburg, 1 kg.
Carbolic Acid
Holland, 9 cks.
Pitch
Cette, 472 t.
Dyestuffs—
Tan Extract
Germany, 20 cks.
Dyewood Extract—
Germany, 1 ck.
Glue—
Holland, 21 cks.
Naphylamine—
Germany, 46 cks.
Paraffin Wax—
Hamburg, 5 cs.
Holland, 10
Salt—
Carlton, N.B., 100 t.
Halifax, N.S., 205
Soda—
Holland, 1 ck.
Sodium Naphthionate—
Germany, 18 cks.
Holland, 6
Zinc Chlorate—
Holland, 20 cks.

HULL.

Week ending March 25th.

Alkali—
Stettin, 1 ck.
Ammonium Sulphate—
Dunkirk, 200 bgs.
Ghent, 100
Palermo, 183
Venice, 259
Bleaching Powder—
Stettin, 25 cs.
Caustic Soda —
Hamburg, 10 dms.
Hango, 40
Chemicals *(otherwise undescribed)*
Amsterdam, 37 cks.
Antwerp, 2 2 cs.
Bombay, 917 2 40 pks.
Christiania, 47
Copenhagen, 2 20 btls.
Gothenburg, 28
Hamburg, 142 18
Hango, 3 6 pks.
Kurrachee, 180
New York, 515
Reval, 2
Rotterdam 20 91
Stettin, 25 10 10
Trieste, 140
Coal Products—
Creosote
Bordeaux, 60 dms.
Pitch
Antwerp, 649 t.
Cottonseed Oil—
Amsterdam, 15 t. 1 c.
Antwerp, 75 11
Bordeaux, 20 11
Christiania, 17
Copenhagen, 18 10
Drontheim, 2 3
Ghent, 4 8
Gothenburg, 10 6
Hamburg, 14 5
Rotterdam, 43 12
Rouen, 7 12
Stettin, 5 4
Dyestuffs *(otherwise undescribed)*
Reval, 3 cks.
Riga, 2 cs. 6 pks.
Glue—
Gothenburg, 20 bls.
Linseed Oil—
Amsterdam, 5 t.
Antwerp, 9 11 c.
Bombay, 13 5
Christiania, 12 5
Christiansand, 1 15
Christiansund, 1 1
Copenhagen, 3 5
Drontheim, 4 16
Ghent, 7
Hamburg, 5 5
Kurrachee, 4
Rotterdam, 6 14
Stavanger, 1 16
Manure—
Dunkirk, 2,498 bgs.
Paint—
Antwerp, 13 cks.
Painters' Colours—
Amsterdam, 15 cks.
Antwerp, 47 28 cs 421 dms.
Bombay, 4 91 307 56 pks.
Bremen, 5
Christiania, 1
Christiansand, 38
Copenhagen, 43 15
Danzig, 13 3
Drontheim, 5
Ghent, 23 1 136 dms.
Gothenburg, 8 4 1 pk.
Hamburg, 42 4
Hango, 7
Kurrachee, 3 45
New York, 44 10 dms.
Reval, 4
Riga, 2
Rotterdam, 25 2 110 pks.
Stettin, 66
Slag—
Bombay, 63 t.
Stettin, 3,720 bgs.
Soap—
Bombay, 10 cs.
Drontheim, 3
Tallow—
Bombay, 29 cks
Tar—
Amsterdam, 16 cks.
Antwerp, 3
Christiania, 3
Christiansund, 8
Copenhagen, 42
Drontheim, 8
Gothenburg 3
Rotterdam, 8 cs.
Stettin, 18
Turpentine—
Bombay, 15 dms.
Varnish—
Amsterdam, 15 cks. 2 cs.
Antwerp, 10
Bombay, 40 dms.
Bordeaux, 1
Ghent, 4
Gothenburg, 3
Hamburg, 1
Hango, 1
Rotterdam, 13
Stettin, 7

GLASGOW.

Week ending March 30th.

Ammonium Carbonate—
Christiania, £47
Ammonium Sulphate—
Amsterdam, 30 t.
Gandia, 100 15 c.
Italy 41 10
San Pedro, 101 16 3 q.
Bleaching Powder—
Calcutta, 30 t. 3 c.
Coal Products—
Benzol
Rotterdam, £115
Carbolic Acid
Rotterdam, £110
Creosote Oil
Christiania, £7
Russia, 385
Pitch
Havre, £520
Rangoon, 131
Tar
Danzig, £203
Russia, 795
Singapore, 25
St. John's, N'fd., 72 17s.
Tar and Pitch
Madras, £184
Disinfectants—
Singapore, £26
Dyestuffs *(otherwise undescribed)*
Canada, £171
Farina—
Oporto, 7 t. 10 c.
Gelatine—
New York, £196
Glauber Salts –
Gothenburg, £20
Glucose—
Christiania, 1 t. 8 c. 3 q.
Iodine—
Rotterdam, £93
Lead Nitrate –
Rotterdam, £40
Linseed Oil—
Hong Kong, 3 t. 9 c. 1 q.
Fremantle, 1 4
St. John's, N'fd. 4 3
Magnesium Sulphate—
St. Stephen, N.B., £38 13s.
Manure—
Oporto, 13 t. 10 c.
Painters' Colours—
Cuba, £255
Hankow, 36 18s.
Hong Kong, 192
New York, 75
St. John's, N'fd., 160 19
Singapore, 46
Shanghai, 168
Valparaiso, 170
Paraffin Wax –
Christiania, 5 t. 6 c. 3 q.
France, £72
Genoa, 20
Russia, 77
Turkey, 64
Potassium Bicarbonate—
Gothenburg, £130
Hiogo, 725
Yokohama, 568
Potassium Cyanide—
New York, £1,363
Potassium Prussiate –
New York, £100
Red Lead—
Christiania, 10 c.
Soap—
Fremantle, 1 t. 15 c. 3 q.
Hong Kong, 1 12 1
St. John's, N'd., 2 5 2
Singapore, 3 9 2
Valparaiso, 1 5
Sodium Bicarbonate—
Bordeaux, 5 t. 2 c.
Starch—
Constantinople, £40
Superphospha es –
San Pedro, 24 t. 12 c. 2 q.
Tallow—
Rotterdam, 16 t. 18 c.
Turpentine—
Singapore, £20
Varnish—
Hong Kong, £34

TYNE.

Week ending March 25th.

Alkali—
Amsterdam, 9 t. 6 c. 3 q.
Christiania, 1 15 1
Hamburg, 6 3
Rotterdam, 3 11 2
Aluminium Sulphate—
Lisbon, 15 t. 1 q.
Antimony—
Hamburg, 20 t.
Arsenic—
Amsterdam, 2 t. 3 c. 1 q.
Christiania, 2 4
Barium Binoxide—
Rotterdam, 10 t. 16 c. 2 q.
Barium Carbonate—
Antwerp, 19 t. 12 c.
Bleaching Powder—
Amsterdam, 16 t. 17 c. 2 q.
Antwerp, 35 14 1
Christiania, 13 5 1
Copenhagen, 4 19 3
Gothenburg, 55 10
Rotterdam, 5 8 3
Caustic Soda—
Antwerp 9 t. 17 c. 1 q.
Christiania, 1 5
Copenhagen, 3 3 3
Gothenburg, 65 5 3
Venice, 29 2
Colours—
Copenhagen, 3 c. 3 q.
Litharge—
Gothenburg, 1 t. 1 c. 3 q.
Rotterdam, 1 9
Magnesia—
Hamburg, 2 t. 9 c. 1 q.
Manganese—
Antwerp, 13 cks.
Manure—
Valencia, 395 t.
Paint—
Antwerp. 10 t. 10 c.
Christiania, 13
Copenhagen, 6 10 3 q.
Gothenburg, 1 1
Hamburg, 3
Painters Colours—
Antwerp, 2 c.
Rotterdam, 8 dms.
Phosphorus—
Valencia, 15 c.
Red Lead—
Antwerp, 13 t. 5 c. 2 q.
Copenhagen, 1 4 3
Gothenburg, 16 14 1
Hamburg, 26 2 1
Venice, 1 19 2
Soda—
Christiania, 15 t. 6 c. 2 q.
Rotterdam, 5 3
Soda Ash—
Gothenburg, 19 t. 18 c. 1 q.
Hamburg, 19 19 2
Sodium Sulphate—
Gothenburg, 4 t. 18 c. 3 q.
Sulphur—
Christiania, 350 t.
White Lead—
Gothenburg, 1 t. 5 c.

GOOLE.

Week ending March 22nd.

Alkali—
Rotterdam, 1 ck.
Bones—
Calais, 150 bgs.
Chemicals *(otherwise undescribed)*
Amsterdam, 30 cks.
Rotterdam, 200
Coal Products *(otherwise undes.)—*
Amsterdam, 67 cks. 10 cs.
Antwerp, 101 17
Boulogne, 13 6
Hamburg, 6
Rotterdam, 21 3
Coal Products—
Pitch
Antwerp, 854 t.
Dyestuffs *(otherwise undescribed)*
Hamburg, 21 cks.
Rotterdam, 44
Manure—
Dunkirk, 373 bgs.
Painters' Colours—
Amsterdam, 3 cks.
Boulogne, 7 7 cs.
Ghent, 2 dms.
Rotterdam, 9 1
Slag—
Helsingborg, 429 t.

GRIMSBY.

Week ending March 25th.

Alkali—
Hamburg, 21 cs.
Rotterdam, 10
Ammonium Sulphate—
Rotterdam, 300 bgs.
Chemicals *(otherwise undescribed)*
Gothenburg, 1 cs.
Hamburg, 20 dms.
Coal Products *(otherwise undes.)—*
Dieppe, 61 cks. 3 pks.
Hamburg, 1 cs.
Painters' Colours—
Antwerp, 2 cks. 1 cs. 1 pk.
Hamburg, 1
Rotterdam, 1 kg. 1 dm.

PRICES CURRENT.

WEDNESDAY, April 5, 1899

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9	&	8/3
,, Glacial .. .. ,,		35/-	
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	9
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	0	11½
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	0
Arsenic, white powdered .. .. nett per ton	18	5	0
Alum, loose lump .. .. ,,	4	5	0
Alumina Sulphate (pure) .. .. ,,	3	15	0
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2¾
,, = 24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	19	10	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	11	0	0
,, ,, (grey) Hull .. .. ,,	10	18	9
Aniline Oil (pure) .. .. per lb.	0	0	4½
Aniline Salt ,, ... ,,	0	0	4
Antimony .. .. per ton	38	15	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	4	5	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	5	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6¼
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 3 % A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	7½
,, 50/90 ,, ... ,,	0	0	7¾
Carbolic Acid (crude 60°) .. .. ,,	0	1	11½
,, (crystallised 40°) .. .. .. per lb.	0	0	6¾
,, (liquid 95/97%) .. .. .. per gallon	0	1	0
Creosote (ordinary) .. .. ,,	0	0	3½
,, (filtered for Lucigen light) .. .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	3	0	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	3	0
Solvent Naphtha, 90% at 160° .. .. .. per gallon	0	1	1
Copper .. .. per ton	71	0	0
,, Sulphate .. .. ,,	24	15	0
,, Oxide (copper scales) .. .. ,,	56	0	0
Glycerine (crude) 80% .. .. ,,	24	10	0
,, (distilled S.G. 1250°) .. .. ,,	48	10	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	2	6
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	15	10	0
,, Litharge Flake (ex ship) .. .. ,,	16	0	0
,, Acetate (white ,,) .. .. ,,	26	0	0
,, ,, (brown ,,) .. .. ,,	18	0	0
,, Carbonate (white lead) pure .. .. .. ,,	18	10	0
,, Nitrate .. .. ,,	22	10	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	0	0
,, ,, (grey) (ex ship) .. .. ,,	7	17	6
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton	9	10	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	15	10	0
,, Borate .. .. per cwt.	2	0	0
,, Ore, 70% .. .. per ton	3	10	0
Methylated Spirit, 61° O.P .. .. per gallon	0	2	0
Naphtha (Wood), Solvent .. .. ,,	0	3	0
,, ,, Miscible, 60° O.P. .. .. .. ,,	0	3	10
Oils:—			
Cotton-seed .. .. per ton	17	15	0
Linseed .. .. ,,	19	10	0
Stearine .. .. ,,	26	0	0
Phosphorus (Yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	10	0
,, Chlorate .. .. per lb.	0	0	3½
,, Cyanide, 98 % .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) 90 % .. .. per ton	22	0	0
,, ,, ,, 75/80 % .. .. ,,	17	15	0
,, Potash Hydrate Liquid 50 % .. .. ,,	10	15	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	2	12	6
,, Prussiate Yellow .. .. per lb.	0	0	7¾
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	0
,, Muriate, 80 % ,, ... ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3½
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % .. nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	5	0
,, ,, (Carb. Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Soda Crystals) .. .. .. ,, ,, (f.o.r. w'ks.)	2	10	0
,, Acetate (ex-ship) .. .. ,,	12	15	0
,, Arseniate, 45 % .. .. ,,	13	5	0
,, Chlorate .. .. per lb.	0	0	3¾
,, Borate (Borax) .. .. nett per ton	16	0	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton (10 ton lots)	7	12	6
,, ,, (74 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	0	0
,, ,, (60 % Caustic Soda) .. ,, ,, (10 ton lots)	6	0	0
,, ,, (pure liquor 90° Tw.) .. ,, ,, (10 ton lots)	3	10	0
,, ,, 77/78 % powdered (99 % hydrate) ,, (10 ton lots)	11	10	0
,, Bicarbonate (cwt. kegs) .. .. ,,	6	15	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25 % .. .. ,,	16	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	8	6
,, Nitrite, 98 % .. .. per ton	26	0	0
,, Phosphate .. .. ,,	10	7	6
,, Prussiate .. .. per lb.	0	0	5¾
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	10	0
,, Stannate, 40 % .. .. per cwt.	3	10	0
,, Sulphate (Salt-cake) .. .. per ton	1	10	0
,, ,, (Glauber's Salts) .. .. .. ,,	1	15	0
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	4	15	0
Strontium Hydrate, 100 % .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. .. per lb.	0	0	5¾
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton	7	0	0
,, (Roll Brimstone) .. .. ,,	6	0	0
,, Brimstone: Best quality .. .. ,,	4	12	6
Superphosphate of Lime (26 %) .. .. ,,	2	10	0
Tallow .. .. ,,	24	0	0
Tin Crystals .. .. per lb.	0	0	7½
,, English Ingots .. .. per ton	114	5	0
Zinc (Spelter) .. .. ,,	27	15	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	7	10	0
,, Sulphate, Crystal .. .. ,,	7	10	0

THE

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AND

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LATE ADVERTISEMENTS.

TENDER.

ULVERSTON URBAN DISTRICT COUNCIL.

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THE Gas and Water Committee invite Tenders for the purchase of their Surplus TAR produced at their Works during the year commencing 1st July next.

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Engineer and Manager.

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THE FLASH-POINT OF OIL AND ITS RELATION TO SAFETY.

THERE seems no end to the useless contentions concerning the true relation between the flash-point of petroleum and its safety as a illuminant. Most of the views which are represented are aspects entirely subsidiary to the one and only case that needs reasoning out, and we are pleased to be able to agree for once on this question with a worthy contemporary which thinks "there was never a controversy in which facts were more garbled, misrepresented, and deliberately ignored when they did not support the argument." It is so! The *facts* are, and always have been, impregnable, viz:—The higher the flash-point, the less the danger from the general inflammability of the oil and its ignition in the case of accidents. But the base perversions that facts have been put to when they have clashed with the *argument* that low-flash oil is as safe as high-flash oil, have been as multitudinous as they have been illogical or unfounded.

We know it is customary for the daily press to adhere to startling headings even if they are erroneous, so that all oil lamp accidents are called "explosions."

The low-flash partisans seem to think there is cause for congratulation in the fact that very few (if any) oil lamp explosions have ever really occurred. In point of fact, they have nothing to do with the case. If anything is completely "exploded," it is the quibble about oil explosions in lamps. It is absolutely immaterial whether there are explosions or not. The point is this: Fatalities occur daily through oil lamps being upset, broken, or cracked by overheating, when the oil escapes and becomes ignited. Under these conditions which is the safer of the two—an oil which *readily* gives off inflammable vapour at 73°F., and when ignited burns fiercely with a flare, or an oil which gives off *no* inflammable vapour below 100°F., and when ignited burns quietly, and with as small a flame as colza oil? The tendency of an oil to ignite is in direct ratio to the lowness of the flash point. There are bad burners, and fragile lamps. Suppress them by all means—if possible; but the risk of fire will be there all the same. Gunpowder is comparatively safe in a powder-magazine, but it is nevertheless gunpowder.

Our contemporary shares a very widespread, but incorrect, belief as to what is being advocated in pressing for a standard of 100° F. instead of the existing 73° F. It voices this belief when it thinks that what is asked for "is an Act of Parliament for forbidding the] burning of petroleum which flashes at less than 100°." Nothing of the sort! Nobody wants to forbid anybody burning anything. They can burn gun-cotton, or ether; or they may even go to such fatuous lengths as to burn coal gas, laden with sulphur, and of a candle power which just makes darkness visible. All that is asked for is that the restrictions which for 28 years have been adopted to regulate the storage and transport of oils flashing

below 73° F., shall in future apply to oils flashing below 100° F. We should also like to see the standard Abel test made universal as far as oils imported into this country are concerned, so that in the future barrels branded "130° Test" shall not pass into circulation and mislead both seller and purchaser. Abel test, and that only, should be accepted as the criterion of an oil in the matter of flash point.

MERSEY AND IRWELL JOINT COMMITTEE.

MANCHESTER TO BE PENALISED.

A MEETING of the Mersey and Irwell Joint Committee was held in Manchester on Monday afternoon, Alderman C. Brierley (Bury), presiding.

A letter was read from the Town Clerk of Manchester asking for a further adjournment of the proceedings against the Corporation for polluting the Ship Canal.

Mr. T. W. Killick, chairman of the Consulting Sub-committee, said he desired as briefly as possible to call the attention of the Committee to their position as regarded the Manchester Corporation. He then reviewed the history of the proceedings, and continuing said that in the letter of the Town Clerk of Manchester asking them to again adjourn the summons, and in the debate and resolution of the Manchester City Council on the 16th March, there was nothing to indicate when the experiments would be completed, or when the Local Government Board would be asked to hold the adjourned inquiry. But, while Manchester was only experimenting, all the other county boroughs in the Watershed were constructing works to filter their sewage. The county boroughs were in advance of Manchester, and the smaller authorities were in advance of the county boroughs, and most of the manufacturers in the Watershed were efficiently treating their effluents. The result of all this work was that the upper waters of the Irwell were enormously improved, and the river in Manchester was better than it had been for at least 30 years past. Manchester, that lagged behind all the others, gained the most by this purification For not only had she a purer stream within her boundaries, but the Ship Canal in which she was so greatly interested required less dredging. If Manchester was to be allowed to indefinitely delay the efficient treatment of her sewage, other polluters would become lax, and the Committee would break down, and the Irwell would relapse into as bad a condition as it was when the Committee began their labours. But if Manchester would do, as she had helped to compel others to do, that was, filter her sewage, the Irwell and Mersey would soon be freer from solid pollution, and in a non-putrescent condition. The effluent turned by Manchester into the Ship Canal was a very bad one. These being the facts he (Mr. Killick) thought it was neither fair nor right for the Committee to again adjourn the hearing of the summons for penalties against Manchester. And he believed it would be for the public interest that the case for the Committee and the case for Manchester should be fully stated before Mr. Yates. Therefore he moved :—"That the summons for penalties against the Manchester Corporation for not obeying the order of the Court be proceeded with on the 4th May."

Mr. J. Brierley (Whitefield) seconded the proposition.

Mr. H. Grimshaw (Manchester) speaking against the motion, said that the Rivers Committee of the Manchester Corporation was practically in the hands of the Local Government Board, because they could not proceed with the scheme, however much they might believe in it, until the Local Government Board consented to it.

The proposition was then put to the meeting, and carried by nine votes to two. The effect of this is that penalties will be applied for against the Manchester Corporation when the case again comes before the Court on the 4th of May.

The following are the chief points of the letter which was addressed to the Mersey and Irwell Joint Committee :—"Since the adjournment of the Local Government Board inquiry on the 13th January last the attention of the three experts has been given to the matter, and Mr. Fowler, the chemist of the Corporation, has been continuously employed under their direction, and has kept himself in communication with them with a view to answering the several observations made by the inspectors at the last inquiry. We learn from the experts that the experiments under their direction have continued in full operation for the whole period, and that under their direction additional experimental beds have been constructed for specially dealing with storm water. It was considered necessary by them, in order that the information sought by the inspectors should be completely arrived at, that two extra contact beds should be provided of the same dimensions as those already constructed under their direction, but containing material differing in grade, and having a system of cross-connections and by-passes so arranged that any pair of beds may be worked in conjunction, or each of the four beds separately. In this way, not only can continuous experiments be carried out during a storm, but other important questions, with reference to the grading of material and times of contact necessary on the upper and lower beds respectively, can be investigated.

"The experts are determined that the scheme presented at the adjourned inquiry shall be complete as regards all principles involved, and particularly with regard to storm water; this they felt would not be possible without the additional plant mentioned above. This requisite plant is now all but finished, and the experts will make a communication as soon as they have obtained the necessary data. The Local Government Board will then be asked to fix a date for the adjourned inquiry. The following suggestions of the inspectors have also received the attention of the three experts and of the chemist, and in relation thereto full information will be submitted to the inspectors, namely :—

1. Continued incubator tests of mixtures of the filtrate and Ship Canal water.
2. Laboratory experiments on the filtration of trade refuse from works in the city of Manchester not yet connected up.
3. Information has been obtained as to the amount and character of trade refuse already entering the sewers.
4. Analysis of filtrate at different periods of discharge.
5. Laboratory experiments on the removal of suspended matter by sedimentation.
6. Temperature records of sewage and filtrates, and relation of these to purification. Also the further results obtained by the continued use of the double contact beds have been regularly sent each week to the inspectors."

SOCIETY OF CHEMICAL INDUSTRY.

MANCHESTER SECTION.

THE annual meeting of the Manchester section of the Society of Chemical Industry was held on Friday, 7th inst., at the Victoria Hotel, Dr. Watson presiding. The following gentlemen were elected members of the Committee :—Dr. Langdon, Dr. Schunck, Mr. Irving, Dr. A. K. Miller, Mr. Levinstein, and Mr. Brown, whilst Mr. J. Carter Bell was re-appointed honorary secretary. Mr. William Thomson read a paper "On the connection between flash-point and danger in burning mineral oils, and deductions drawn from the examination of the burners and the oils used in lamps which have exploded in Manchester and Salford during the last few years." Mr. Thomson said the Manchester and Salford Sanitary Association had taken some action in this matter, with a view of bringing the subject before the notice of Parliament. It was the suggestion of the Association that the police of Manchester and Salford should collect all the burners of the lamps which had exploded, and that they should be examined with a view of finding whether any one burner was more dangerous than another. Since November 9, 1895, there had been forty lamp explosions in Manchester and Salford, and in thirty-two of these the burners were found to be of the same pattern, this particular pattern being exceptionally dangerous. In every case the reservoirs of the lamps which exploded were of glass, and it was his opinion that no lamp should have a glass reservoir. He believed that every effort should be made to obtain a flash-point for oil of one hundred degrees Fahrenheit (Abel test). The reading of the paper was followed by a discussion, in the course of which Mr. Thomson, answering a question, stated that there was no known instance of a lamp exploding at 100 degrees Fahrenheit, this being a perfectly safe temperature. Eventually it was resolved—"That this section of the Society of Chemical Industry urges the Council immediately to represent to the Government the desirability of fixing the flash-point of petroleum for illuminating purposes at a minimum of 100 degrees Fahrenheit." A paper was subsequently read by Dr. W. B. Gerland "On the use of hyposulphite of sodium for titration, especially for estimation of oxygen in sewage effluents," in which he gave a detailed account of the apparatus he employed. There was a short discussion. Mr. Harold Gripper then read a note on "Some changes of composition in some old samples of rape oil," in which it was pointed out that there was little or no relation between the time exposed to air, and the extent of the oxidation. The viscosity increased. The iodine value diminished. There is only a small amount of free acid. He had also found that the insoluble fatty acids increased. The meeting, which was well attended (about 40 being present), was concluded with the usual vote of thanks.

Fire at the Royal College of Science.—A fire broke out on Tuesday night at the Royal College of Science, South Kensington Museum. A quantity of chemicals caught fire with the result that a work-bench and some chemicals were destroyed. A laboratory on the third floor was for some time in jeopardy, but the firemen were fortunately able to extinguish the flames in a very short time.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Manufacture of Gas. G. Wanderpepen and A. V. Berckelaer. 6,325. March 27.

Improvements Relating to the Solution of Cellulose. M. Fremery and J. Urban. 6,557. March 27.

Porous Diaphragms for Electrolytic Cells. H. H. Dow. 6,687. March 28.

Manufacture of Matches. W. P. Akestor. 6,723. March 28.

Improvements in the Manufacture of Nitric Acid, Sulphate of Soda, Ammonium Nitrate, Carbonate of Lead, and such like. W. Garroway. 6,777. March 29.

Improved Process for the Production of Caustic Alkalies and Alkaline Earths, Carbonates of Alkalies and Aluminates. F. Projahn. 6,790. March 29.

Treating Amorphous Phosphorus. S. P. Thompson. 6,818. March 29.

Method and Apparatus for Producing Coke Gas and Bye-products. P. Naef. 6,839. March 29.

Method and Apparatus for Producing Gas and Bye-products. P. Naef. 6,840. March 29.

Method and Apparatus for Producing Gas and Bye-products. P. Naef. 6,841. March 29.

Apparatus for Extracting Chemical Products from Raw Materials. L. C. Reese. 6,859. March 30.

Mills for Pulverising and Mixing. M. J. Davidsen. 6,930. March 30.

Improved Treatment of Mineral or Petroleum Oils. T. Macalpine. 6,945. March 30.

Improvements in Filters. J. Tennant and A. J. Stokes. 6,979. March 30.

Purification of Acetylene. F. Dent. 7,012. March 30.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in the Method of and Apparatus for Treating Sewage and other Effluent Waters. W. Watson, 27, Albany Buildings, Market-street, Bradford, Yorks. Eng. Pat. 9,126. April 20, 1898.

An elaborate mechanical contrivance for the treatment of sewage is described in detail and illustrated with 25 figures. The combination of plant includes a circular precipitation tank, also suited for the septic treatment of the sewage, filter beds and sludge pressing appliances. Special facilities are provided for spreading the sewage upon the filters. For particulars the specification must be consulted.

Improvements Relating to the Conversion of Metallic Lead into Lead Oxides. H. H. Lake, 45, Southampton Buildings, London. (Communicated by A. W. Southard, Newark County, Essex; G. Cook, Allendale, County of Bergan, and H. A. Clark, Sufferen, County Rockland, N. York, all of U.S.A.). Eng. Pat. 1,658. January 24, 1899.

Finely comminuted metallic lead is converted into hydroxide by agitating in water and with blowing air in an enclosed vessel. A number of radial arms carry hollow ploughs or beaters which are connected to a central air box, from which compressed air is supplied to the ploughs. When sufficiently oxidised the charge is run on to rocking screens, which retain the particles of metallic lead, the oxide falling on to a travelling belt beneath. Three products are made: hydroxide of lead, the direct product; hydrated oxy-carbonate, obtained by blowing the former product with carbon dioxide; and minium, prepared by roasting either of the foregoing. There are eleven figures illustrating the blowing and carbonating tanks, and also the apparatus for comminuting the lead.

The Generation of Gas for Lighting, Heating, and Power Purposes from Sewage or other Decaying Organic Matter, and Improvements in Tanks for the Purification of Sewage. D. Cameron, Sylvan-road, Pennsylvania, Exeter; F. J. Commin, 7, Bedford-circus, Exeter, and A. J. Martin, Bradninch House, Exeter. Eng. Pat. 1,188. January 15, 1898.

Where sewage is treated in covered tanks, as in the septic process, the gases given off are collected in gas-holders, in which the pressure is kept reduced so as to facilitate the collection of the gases. The arrangements are essentially of a mechanical nature, and refer more particularly to returning some of the gas to the tank, when the level of the liquid therein is altered. There are three figures.

Improvements in the Process for Manufacturing Barium Oxide and Sulphide. C. S. Bradley, Avon, New York, and C. B. Jacobs, East Orange, New Jersey. Eng. Pat. 26,060. December 9, 1898.

A mixture of barium sulphate and carbon is heated in an electric furnace. Decomposition takes place in two stages. First of all the carbon re-acts with the barium sulphate to form sulphide. On continuing the heating a double reaction sets in between the sulphide and sulphate, producing barium oxide and sulphur dioxide. The complete oxidation of the barium cannot be attained because the sulphide is formed faster than oxide, but with a charge containing 20 parts by weight of barium sulphate, and 1 of carbon, a product containing 60 per cent. of barium oxide and 40 per cent. of sulphide can be obtained, there being only a small percentage of undecomposed sulphate left.

Improved Manufacture of Polysulphates. Dr. C. Uebel and The Chemische Fabrik, Rhenania, Aschen, Prussia. Eng. Pat. 27,240. December 24, 1898.

Polysulphates suitable for use as substitutes for fuming sulphuric acid are prepared by adding about 105 parts of 60 % sulphuric acid to 100 parts of sodium bisulphate, in the molten state. By heating to 260°C. the water present in the acid is fully evaporated, and by cooling slowly a crystalline cake of polysulphate is obtained. It has the formula $NaH_3(SO_4)_2$ and melts at 95° C. Several examples of how this polysulphate may be used in industrial organic chemistry are given, and also for the manufacture of nitric acid.

GOLD OUTPUT IN THE RAND.

A RECORD MONTH.

THE output from the Witwatersrand district during March (in bullion ounces), as cabled by the Chamber of Mines of the South African Republic, amounts to 441,578 oz., as against 404,335 oz. for February, and 325,907 oz. for the corresponding month of 1898. From the outside districts 22,458 oz. are reported, as against 20,831 oz. for February, and 21,736 oz. for the corresponding month last year. The total return, therefore, made to the Chamber amounts to 464,036 oz., as compared with 425,166 oz. for the previous month, an increase of 38,870 oz. The following are the monthly returns from the Rand district alone since the beginning of 1895 :—

	1895.	1896.	1897.	1898.	1899.
	oz.	oz.	oz.	oz.	oz.
January	177,463	148,178	209,832	313,826	410,145
February	169,295	167,018	211,000	297,975	404,335
March	184,945	173,952	232,067	325,907	441,578
April	186,323	176,707	235,698	335,125	—
May	194,580	195,008	248,305	344,160	—
June	200,941	193,640	251,529	344,670	—
July	199,453	203,873	242,479	359,343	—
August	203,573	213,418	259,603	376,911	—
September	194,764	202,561	262,150	384,080	—
October	192,652	199,889	274,175	400,791	—
November	195,218	201,113	297,124	393,310	—
December	178,428	206,517	310,712	419,504	—
Total	2,277,635	2,281,874	3,034,674	4,295,602	1,256,058

THE QUALITY OF MANCHESTER GAS.—In the Manchester City Council on Wednesday, in reply to Mr. Boyle, Mr Alderman Gibson said it was the intention of the Gas committee to purify their gas with lime, and the process was now in operation at the works in Rochdale Road. It had been in operation about a week, and the result was that the sulphur had been reduced by pretty nearly 50 per cent. The committee had the fullest hope that the purification of gas by lime would not only result in the elimination of the sulphur, but would add to the illuminating power. Mr. Grimshaw: Why is the gas worse on the Sunday than on other days? Mr. Alderman Gibson: I cannot understand why it should be worse on Sunday than on other days. I should have thought the better the day the better the gas.

CENTRAL CYCLONE CO., LTD.—We have received from the Central Cyclone Co., Ltd., of 343 and 345, Cable Street, London, E., one of their new catalogues, which is tastefully compiled and illustrated by a number of excellent Meisenbach blocks. This firm has evidently been going ahead as there are illustrations of their grinding works in Paris as well as in New York, and of pulverisers and disintegrators in all stages of construction. The Cyclone Pulveriser grinds chemicals, litharge, red lead, coal, &c., and gives in one operation an impalpable powder without the necessity of dressing or sieving. The value of these machines is clearly shown by the fact that monopolies have been granted for their use in certain trades and it is not to be presumed that such agreements would be entered into unless the machines were of exceptional value. The Cyclone Disintegrators manufactured by the same firm are recognised as giving larger outputs, with better grinding and less power, than most others.

THE PROGRESS AND PROFITS OF THE GERMAN CHEMICAL INDUSTRIES IN 1897.

[SPECIALLY CONTRIBUTED.]

THE twenty-first annual meeting of the "Society for promoting the welfare of the German Chemical Industries" was held at Coblenz in September last, and from the report presented by the council of this society to its members we extract the following:—

The number of chemical works and factories has increased from 6,144 in 1896 to 6,316 in 1897; the number of workers employed from 124,000 to 130,000. The total amount paid in wages in 1896 was £5,685,000., and in 1897 £6,045,000. The average wages received per man has increased from £44. 14s. per annum in 1895 to £45. 16s. in 1896, and to £46. 2s. in 1897. This equals an average of 17s. 8d. per week.

The imports of raw materials used in the various branches of the chemical manufacture have increased by 129,000 tons, or 7·7 per cent; the exports of chemical manufactures have increased by 73,000 tons—6·9 per cent. On account of the fall in prices, this increase is not apparent in the values for the two years; these remain stationary.

The value of the exports of chemical products exceeds that of the imports by £3,670,000.

The following figures relating to profits are drawn from the reports of 97 companies, which publish balance sheets. The aggregate capital of these 97 companies is £13,409,500., and the total sum distributed as dividend in 1897 was £1,723,548., or an average of 12·1 per cent. This is a slight fall, as compared with the average for the previous year. The following Tables of average profits are interesting:—

TABLE I.

AVERAGE DIVIDENDS OF THE GERMAN CHEMICAL INDUSTRIES.

	%		%
1888	9·78	1893	13·18
1889	10·58	1894	13·44
1890	12·81	1895	12·71
1891	11·29	1896	12·30
1892	11·92	1897	12·11

TABLE II.

DISTRIBUTION OF DIVIDENDS IN THE GERMAN CHEMICAL INDUSTRIES.

20 companies paid		*nil.*
2 " "	1 —	2½ %
11 " "	2½ —	5 "
17 " "	5 —	7½ "
21 " "	7½ —	10 "
14 " "	10 —	15 "
12 " "	over	15 "

TABLE III.

AVERAGE DIVIDENDS IN THE GERMAN ALKALI INDUSTRY.

	%		%
1888	7·85	1893	7·81
1889	7·36	1894	9·23
1890	7·63	1895	8·64
1891	6·42	1896	9·32
1892	6·52	1897	8·56

TABLE IV.

AVERAGE DIVIDENDS IN THE GERMAN PHARMACEUTICAL AND PHOTOGRAPHIC CHEMICAL INDUSTRIES.

	%		%
1888	13·15	1893	14·28
1889	12·45	1894	11·04
1890	13·69	1895	9·84
1891	11·09	1896	9·59
1892	14·71	1897	7·89

TABLE V.

AVERAGE DIVIDENDS IN THE GERMAN COLOUR INDUSTRY.

	%		%
1888	15·44	1893	23·86
1889	17·50	1894	23·13
1890	20·75	1895	23·59
1891	20·93	1896	23·59
1892	23·19	1897	22·09

TABLE VI.

AVERAGE DIVIDENDS IN THE GERMAN MATCH INDUSTRY.

	%		%
1888	8·88	1893	7·61
1889	7·45	1894	6·06
1890	5·25	1895	7·30
1891	8·90	1896	8·00
1892	6·06	1897	8·73

TABLE VII.

AVERAGE DIVIDENDS IN THE GERMAN SUPERPHOSPHATE AND ARTIFICIAL MANURE INDUSTRY.

	%		%
1888	8·25	1893	8·35
1889	10·23	1894	6·69
1890	10·95	1895	3·75
1891	9·65	1896	1·64
1892	9·85	1897	1·83

TABLE VIII.

AVERAGE DIVIDENDS IN THE GERMAN EXPLOSIVES INDUSTRY.

	%		%
1888	16·40	1893	17·41
1889	13·83	1894	17·37
1890	19·73	1895	18·40
1891	13·69	1896	14·70
1892	15·86	1897	15·45

The profits made during the last ten years in the German colour industry (see Table V.) hardly bear out the statements made in a recent issue of the "Zeits. fur Angew. Chemie" that in these special industries the expenditure upon research work swallows up the larger portion of the profits. Dividends of from 15 per cent. to 23 per cent. are a very respectable residuum.

One reason for the flourishing state of the German chemical industries generally, as compared with those in our own country, is to be found in the statistics quoted at the commencement of this article. The average wages per man in the year 1897 were only 17s. 8d per week. In Germany there is no Saturday half-holiday, and for a week of 60 to 72 hours this is undoubtedly low. The average for similar industries in this country would be about 50 per cent. higher (or 26s. 6d. per week), and if wages on the English scale were in force, the aggregate amount would, therefore, be increased from £6,045,000. to £9,067,000. Such an increase in the expenditure upon labour would make a striking reduction in some of the dividends quoted above.

Another feature of the German chemical industry is the low salaries which are paid to men of University standard, and possessing Doctors' degrees. In this country such men are rarely found in industrial establishments; in Germany they are the rule. There is a popular idea that technical chemists in Germany are very highly paid. The writer, who has lived and studied in Germany, can state, as the result of personal inquiry, that this is incorrect. The colour works in Germany absorb the most promising men passing from the Universities; yet, on entering these the young Ph. D. has to be satisfied with a salary of from £80. to £100. per annum. After a few months or years spent in research work in the laboratory of the factory, he is drafted into the manufacturing part of the works, and is allowed to make in large quantities one of the pharmaceutical or dye chemicals which he has been instrumental in discovering. Even in this work, which is considered highly paid, his salary rarely exceeds £300. per annum, and depends partly upon his own skill in obtaining a maximum production of the chemical from the raw materials at his command.

It is on this account that German chemists are so ready to emigrate to England or America, where they can command considerably higher salaries; and where, on account of their thorough training, they have little difficulty in obtaining berths.

The low wages paid to the labourers in the German chemical industries, and the smallness of the salaries paid to highly-trained chemists, of course handicap British manufacturers in their competition with German producers, and there is little chance that this country will be able to compete with Germany in the manufacture of fine chemicals and pharmaceutical products until considerable changes have been made in this respect.

THE BEET SUGAR INDUSTRY IN SPAIN.—In a report on the trade of Corunna and district, issued by the Foreign Office recently, it is stated that the cultivation of beet root in the province of Galicia has been attracting the attention of capitalists, and some leading merchants and bankers have been forming syndicates for the purpose of making inquiries, choosing suitable tracts of country for its growth, and eventually establishing sugar factories. The general opinion seems to be that it will be a profitable business.

Reports of Companies.

SAN JORGE NITRATE CO., LTD.

The report of the directors for the year ended December 31 last states that the gross profits on trading amounts to £39,965.; interest and transfer fees increase this to £41,262., but, owing to the serious depreciation in exchange during the past year—which was 17⅜d. on December 31, 1897, and only 12½d. on December 31, 1898—a difference of £6,471. has to be deducted from that amount, which, after the payment of income-tax and London expenses, leaves the sum of £30,301. to be carried to the balance sheet. To this must be added the sum of £2,807. brought forward last year, making the total amount of £33,109. available for distribution. Of this an interim dividend of 2½ per cent. was paid on October 17 last, and the directors now recommend a further dividend of 5 per cent., free of income-tax, making 7½ per cent. for the year, placing £2,814. to the depreciation account, and carrying the balance of £2,170. forward. The directors cannot but regard this result as most satisfactory in view of the extremely low price to which nitrate fell during the past year, and it has only been brought about by the exceptional position in which the company stands as one of the cheapest producers of nitrate. Various proposals have been put forward for the formation of a new combination, but, as indicated in their last report, the directors have found themselves unable to give their adherence to any scheme which does not take into consideration the exceptionally favourable position in which this company is placed by reason of its cheap production. The directors have given their serious attention to the question of the distribution amongst the shareholders of the surplus assets of the company. The depreciation account will now stand at £62,814. to which must be added the sum of £12,185 realised by the sale of the Solferino plant and grounds, making a total of £75,000., and, subject to the approval of the shareholders, they propose to make a return of £1. per share on capital acconnt. An extraordinary general meeting of shareholders will be held for the purpose of passing the necessary resolution.

THARSIS SULPHUR AND COPPER CO., LTD.

The report of the directors of the Tharsis Sulphur and Copper Co., Ltd., for the twelve months ended December 31 last states that the mineral extracted from the Tharsis Mines weighed 195,205 tons, against 231,384 tons in 1897, a decrease of 36,179 tons. The ore from these mines is now mainly set apart for local treatment, the export supplies being almost wholly drawn from Calanas. On fixed property accounts there is a decrease of £117. for working plant removed, and the sum of £3,104. has been written off for depreciation. The amount expended on preparatory works and explorations was £7,166., and, in accordance with the method adopted in previous years, there has been charged against 1898 the sum of £4,277. Calanas Mines—The overburden removed during the year was 314,474 cubic mètres, against 338,710 cubic mètres in 1897. The removal still to be overtaken will be mainly in the eastern extension of the open cast. As regards the western division, it is satisfactory to be able to state that not only has the removal of the overburden been carried out at a very low cost, but the mineral thus uncovered and made available has been found to be of a quality superior to what was anticipated, and has been found specially useful in furnishing supplies of ore suitable for export. The mineral extracted weighed 308,740 tons, against 244,991 tons in the previous year, being an increase of 63,749 tons. In addition, there were 90,308 tons of cupreous sterile removed, a material the extraction of which is necessary to facilitate mining operations, but which, as explained in former reports, it is found can be profitably laid down for local treatment. On the fixed property accounts there is an increase of £624., principally for new railway lines required and new hutches for mineral. For usual depreciations there has been written off the sum of £4,880. There has been expended on preparatory works and explorations £984., and there has been written off against 1898 the sum of £1,544., being one-third of the total outlay for the past three years, in accordance with the usual practice. Lagunazo Mines—Of overburden it was found necessary to remove during the year only 35,657 cubic mètres, the removal of overburden here being now well advanced. The mineral extracted weighed 82,145 tons, against 89,574 tons in the previous year, a decrease of 7,429 tons. The ore from this mine is all reserved for treatment on the spot. It continues to be of fair quality, and has yielded during the year a satisfactory quantity of copper. The total quantity of mineral raised at all the mines during the year has been 586,090 tons (exclusive of cupreous sterile), against 565,949 tons in 1897, being an increase of 20,141 tons, the quantities raised both for export and for local treatment being in excess of those of the previous year. So far as operations at the mines are concerned, the past year has been again one of very successful work, due in great measure to the careful supervision continually exercised with a view to obtaining the best possible results. Economy has been aimed at wherever it could be found practicable without detriment to efficiency, and costs have been brought down till they are now the lowest on record. Railways and piers—The large increase in railway traffic noted in last year's report has been fully kept up during the year under review, the quantity of ore brought down from the mines and of manganese ore and other public traffic continuing to be of large proportions. The shipments made from the shipping pier at Corrales were the largest on record, being in all 420,267 tons. Of pyrites there were shipped last year 378,085 tons, against 310,702 tons in 1897, an increase of 67,383 tons. Of copper precipitate the shipments were 8,823 tons, against 8,906 tons in the previous year. The pier and shipping appliances continue in good working order. A careful inspection was made of the whole at the close of the year. Metal works—These have been steadily at work during the year, and although the supply of cinders is insufficient for their employment to their full capacity, they have, notwithstanding this drawback, done a large amount of profitable work, the quantity of refined copper produced last year having only on one or two occasions been exceeded in the history of the company. The costs of production still continue to be on the lowest scale, a feature specially satisfactory in view of the higher prices of fuel during a great part of the year in consequence of the long-continued strike of the South Wales coal miners. From mines in Spain there has been written off for Tharsis and Calanas the sum of £15,000. and for Lagunazo £5,000. The sum of £15,000. has also been written off the amount standing against railways, rolling stock, and shipping piers, apportioned rateably over these assets. The net profits for the year, together with the balance of £14,165. from 1897, amount to £364,128. The directors recommend that the sum of £343,750. be appropriated to the payment of a dividend of 11s. per share, equal to 27½ per cent. on the capital of the company, free of income-tax, payable on and after Wednesday, May 10 next, and that the balance of £20,387. be carried forward.

THE DISCOVERY OF COAL IN KENT.

PROSPECTS OF COMPETITION WITH THE NORTH.

THE commercial results of the discovery of coal at Ropersole, Kent, are not likely to be great for a long time to come, and it is very much too early yet to say what effect it will have on the coal trade between Lancashire, Yorkshire, and Derbyshire and the London market. The coals we have discovered at Ropersole, says the secretary of the Kent Exploration Co., is a 9-in. seam, and you may guess what is the commercial value of a 9-in seam. The chief point is that it proves there is coal for ten or a dozen miles round Dover in a practically level strata. Our boring is 1,650ft. deep, and that practically corresponds with the first seam found at a depth of 1,136ft. at Dover. The Dover measurement, you know, is from high water mark, and ours is from the level of the ground at the entrance to the boring, a considerable distance above the sea level. On the other hand, our seam is only 9-in. thick, while the first seam at Dover was 2ft. 6in. in depth. The coal is good, and it all depends on the quantity to be won whether we can undersell northern and Welsh coal in the London market. As to the effect of competition from Kent, I cannot do better than refer you to what Mr. John Higson, M.I.C.E., F.G.S., of Manchester, said of the flotation of the Kent Collieries Corporation, Limited, a short time ago. He reported in these words: "I am of opinion that with the exercise of an average amount of judgment and skill the cost of labour alone for getting coal at Dover ought to be less than in the midland and northern counties, whilst materials, such as timber, &c., could be shipped alongside the colliery at very reasonable rates compared with the cost of similar material at inland collieries. The situation of the present Dover colliery and any others that may be sunk in the county of Kent will, in the question of rates, possess a most material advantage compared with the Midland or Northern coalfields. I have for a great many years been connected with the sale of coal from Lancashire, Yorkshire, and Midland coalfields in London and the counties southward thereof, and taking south of the Thames as the commencement of the competitive point between the Dover colliery and the Lancashire, Yorkshire, and Midland coalfields, I am of opinion that at such point the Dover colliery would possess an advantage in rates over the South Yorkshire coalfield of about 6s. per ton, over the Derbyshire coalfield of about 5s. per ton, over the Leicestershire coalfield of about 4s. per ton, and over the Warwickshire coalfield of about 3s. 8d. per ton. The difference would rapidly increase between London and places south of the Thames and distances intermediate between London and Dover. I estimate the average advantage in rate at upwards of 5s. per ton, and if the best qualities of coal are produced, which can only be got in the Derbyshire and South Yorkshire coalfields, the advantage in favour of the rate from the Kent coalfield would be still greater." Mr. Higson goes on to point out, however, that the thinness of the seams discovered would probably mean an additional 1s. per ton on the cost of working.

Agricultural Notes.

SULPHATE OF AMMONIA AS A FERTILISER.

The Earl of Rosebery has for several years had in progress on his estate at Dalmeny, West Lothian, a series of agricultural field experiments, the results of which increase in value the longer they are continued. The tabulated results of last year's trials have now been completed by the agent of the estate, Mr. A. L. Drysdale, under whose skilful direction the experiments are conducted. Dealing first with wheat unmanured after potatoes, following oats, we find that out of eight plots one was unmanured, to serve as a reference plot, and the seven others were all differently dressed. The best yields of wheat —red-chaff square head, seeded at four bushels per acre—were obtained upon two plots which had given respectively the best and the worst yield of potatoes in the preceding year. In the former case the potato crop had been manured with 4cwt. superphosphate, 6cwt. lime compost, and 2cwt. sulphate of ammonia per acre; in the latter case with 4cwt. superphosphate, 3cwt. sulphate of potash, and 2cwt. nitrate of soda. Barley, after turnips, was grown under 12 different conditions as to manuring, and the general result is to indicate the superiority of sulphate of ammonia over nitrate of soda as a source of nitrogen, the former having produced not only a heavier yield per acre but a much superior malting quality of grain. In trials with clover hay 30lb. of broad clover seed per acre were sown with oats following turnips, and ten different manurial dressings were separately employed. Here again the superiority of sulphate of ammonia over nitrate of soda was demonstrated, as regards both the bulk of the produce and its quality. Applications of lime, magnesia, and potash were also effective in increasing the feeding value of the crop, as ascertained by analysis. It was found, however, as might be expected that where the soil was previously well dunged, and possessed a sufficiency of mineral fertilisers, no application of artificial manures was required by the clover crop. Considerable use was made of lime in the various manurial dressings, and it was applied throughout in a mechanically-ground condition with the object of securing uniformity of distribution in the soil. The main idea kept in view in the case of lime is that the annual or biennial application of 4cwt. or 5cwt. per acre of ground lime provides material that can be utilised by the bacteria in the soil. Without it the nitrifying organisms cannot properly discharge their functions and the sulphate of ammonia cannot undergo the charges resulting in the formation of nitrate of lime, a compound directly available as plant food. When this small dressing of lime is provided the sulphate of ammonia is found throughout to give superior results when compared with nitrate of soda. In the case of cereals, moreover, the crop is less liable to lodge with the lime and sulphate of ammonia dressing than with the nitrate of soda dressing.

Good progress has been made in the attempts to combat that often ruinous disease of the turnip crop, finger-and-toe. Lime is the enemy of the fungus *Plasmodiophora brassicæ* associated with this disease, but an initial difficulty arises as to the quantity to be employed. Whilst a small dressing of about 5 cwt. per acre of powered hot lime would be insufficient as a fungicide, a large dressing of as much as 4 tons would overstep the mark by killing the nitrifying and other useful micro-organisms in the soil. An intermediate course was, therefore, resorted to, one ton of powdered lime per acre being put on the land in autumn before ploughing, and one ton when the land was grubbed before sowing the seed in spring. Subsequently, 8 cwt. kainit, 4 cwt. undissolved phosphatic manure, and 1 cwt. sulphate of ammonia were applied in the drill at the time of seeding. The use of kainit and the avoidance of dissolved phosphates—superphosphate of lime, for example —are regarded as essential to success. That success is obtainable must be apparent from the circumstance that though the turnips have been grown for three years in succession on the same infested land, yet the plots treated as described gave a crop of 17 tons per acre, of which only 4 per cent. showed any signs of finger-and-toes, whereas adjoining plots not thus treated grew crops so badly diseased as to be hardly worth lifting.

TRIALS OF "ALINITE."

Professor Somerville has issued a comprehensive report on experiments made during 1898 with crops and livestock in the counties of Cumberland, Durham, and Northumberland. It details the results obtained in the manuring of swedes, potatoes, oats, seeds, hay, and old land hay, and in feeding experiments with sheep and cattle. Like the author's previous reports, it is full of information of practical value, and on that account a perusal of its pages should prove profitable to farmers. An interesting investigation, carried out at Cockle Park, was directed to the determination of the efficacy of the new bacterial powder "alinite," introduced about a year ago by a firm of German manufacturing chemists who claimed that the inoculation of the seed of cereals with it rendered the use of nitrogenous manures unnecessary. A plot of oats was treated with the material, the result being that the yield was raised from three to eight bushels per acre. That the substance has failed to act as a substitute for nitrogenous manures is, however, inferred from the fact that over 30 bushels per acre were got from an adjoining plot receiving 1¼ cwt. sulphate of ammonia and 2 cwt. superphosphate.

Trade Notes.

The Castner-Kellner Patent Case.—Judgment was delivered on Thursday in the Court of Appeal in the case of the Castner-Kellner Alkali Co., Ltd., *v.* the Commercial Development Corporation, Ltd. on the appeal of the defendants (who carry on business at Chorlton-on-Medlock, Birmingham, and elsewhere) from the judgment of Mr. Justice Bigham. The plaintiffs are the owners of a patent granted to Mr. Carl Kellner for an invention of improvements in electrolytic apparatus for decomposing alkaline salts, and for an injunction restraining the defendants from manufacturing or selling caustic soda or other alkali in infringement of their letters patent. The defendants contended that plaintiffs' patent was bad on account of disconformity, and alternatively denied infringement. Mr. Justice Bigham, however, gave judgment for the plaintiffs. Hence the present appeal by the defendants.—Their lordships allowed the appeal, and gave judgment for the defendants with costs, Lord Justice Vaughan Williams dissenting.

Pacific Borax and Redwood's Ltd.—An extraordinary general meeting of the Pacific Borax and Redwood's Chemical Works, Ltd., was held recently, at Winchester House, Old Broad Street, E.C., to consider a resolution to wind up the company voluntarily. Sir Alexander Wilson presided, and explained that the meeting was a purely formal one, and it followed upon the last meeting held by the company. He then formally moved: "That the company be wound up voluntarily." Mr. Halse seconded the motion, which was carried unanimously. The business has been acquired by the Borax Consolidated, Ltd., 77/78, Gracechurch Street, London, E.C.

Exhibition of American Manufactures.—The Philadelphia Commercial Museums desire to call the attention of members of the Manchester Royal Exchange to the cabinet of American manufactures which is now installed in the Exchange Street Gallery. It contains index cards of over 2,000 of the principal manufacturers of the U. S., representing every branch of industry, and as only the names of firms which are interested in the export trade are included it will be found of service to buyers of all descriptions of American goods. The cards are so arranged as to be readily accessible, and will be revised periodically. They are on no account to be removed from the drawers.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols continue their depressing course with 90's at 7½d. and 50/90's 7¾d. to 8d. Carbolic acids are firm, and naphthas keep quietly steady, but there is really very little fresh to be reported concerning these products. Pitch is fairly active at recent values.

Sulphate of ammonia is easier, Beckton quotation has been withdrawn. For prompt business prices have dropped considerably, and for forward the position is easier though not to the same extent as for immediate delivery. For May/June, £10. 2s. 6d. is asked at Hull and Leith. Closing prompt values are:—London (outside makes), £10. 15s; Hull, £10. 15s.; Leith, £10. 15s. Nitrate of soda firm.

MISCELLANEOUS CHEMICAL MARKET.

For alkalies the demand all round is well maintained both for home and export. In caustic soda there is no change in values and quotations remain as follows:—f.o.b. Liverpool, 77%, £7. 12s. 6d.; 74%, £7. 7s. 6d.; 70%, £7.; 60%, £6. nett, 10-ton lots. For ammonia alkali, makers are well engaged with orders, with the exception of the American market, at remunerative prices. 58% alkali, bags, f.o.r., remains still at £3. 17s. 6d. per ton. Soda crystals and bicarbonate are unchanged. For bleaching powder the demand continues active and price is rather firmer at £4. 17s. 6d. to £5. f.o.b. Liverpool, hardwoods, and £4 2s. 6d. to £4. 5s. softwoods, f.o.r. makers' works. Chlorates of potash and soda are unchanged at 3½d. and 3¾d. per lb.

respectively. Sulphate of copper has again further improved and is firm at £24. 15s. f.o.b. Saltcake in general good demand at 29s. 6d. per ton, in bulk, f.o.r. Lancashire works. Sulphur steady at £4. 10s. to £4. 11s. 3d. per ton. For vitriol and muriatic acid there is a good inquiry. Potash, caustic and carbonate, are selling freely, and there are no changes in values to report. Brown acetate of lime is steady at £4. 17s. 6d. to £5., c.i.f.; grey acetate £7. 15s to £8. per ton. Foreign white sugar of lead £25. per ton; brown £18. 10s. per ton. White powdered arsenic, owing to shorter supply, has risen to £18. 10s., and a further advance is probable. Prussiate of potash firm at 7¾d. per lb Soda scarce at 5⅞d. per lb. Cyanide firm at 1s. 1d per lb. Green copperas continues in active request, and price rather firmer. Carbolic acids, liquid and crystals, stand firm, but without change in quotation. Aniline oil and salt somewhat quiet at 4½d. and 4d. per lb. respectively. Nitrate of soda 8s. 3d. per cwt. For borax rather lower quotations are appearing. Tin and zinc salts firm. Sulphocyanides dull.

REPORT ON MANURE MATERIAL.

There has been more doing in mineral phosphates, especially in the forward position, and the tendency of prices is to harden. Florida, 77/80%, rock is worth fully 8¾d. per unit, c.i.f. to U.K., 1900 shipment, and there are no sellers for shipment this year. For South Carolina rock 6½d. per unit is required, and the same price would have to be paid for 58/63% Algerian, 1899 shipment. Further ahead, ¼d. per unit less would be business for Algerian.

Bone meal is somewhat easier and £5. per ton would now be accepted. There is nothing reported in River Plate cargoes.

Nitrate of soda has been a very strong market, but owing to arrivals it has become easier, and 8s. 6d. per cwt. is closing value of refined quality. Ordinary quality may be had at 8s. 4½d. per cwt. Dried blood is in request at extreme prices.

THE METAL MARKETS

LONDON, WEDNESDAY.—Pig iron: Scotch warrants closed at 54s.; Middlesbrough, 47s. 9d. cash; and hematite, 58s. 2½d. Copper variable: Chili bars, G.O.B.'s and G.M.B.'s, closed at £72 10s. to £72. 15s. cash, and £71. 12s. 6d. to £71. 17s. 6d. three months. Tin changeable: Straits closed at £111. 18s. 9d. to £112. 8s. 9d. cash, and £112. 8s. 9d. to £112. 18s. 9d. three months; Australian, £112. 7s. 6d.; English ingots. £115. Lead firm: Spanish, £14. 10s.; English, £14. 13s. 9d.; Silesian spelter, ordinary, £27. 15s. Nickel, 1s. 2½d. Antimony, £39. Quicksilver: First hands, £8. 5s.; second hands, £8. 1s. *Copper shares* steady: Cape, 4⅛ to 4¼; Copiapo, 3⅜ to 3 5/16; Libiola, 2⅛ to 2¼; Mason and Barry, 3¾ to 4; Rio Tinto, 42 to 42⅛; Tharsis, 8⅜ to 8⅝.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

OILS.—Palm oil is rather easier for Lagos at £21. 7s. 6d. ex-quay, but all other descriptions keep steady. Olive has been selling fairly well on spot, and recent values are well maintained. Linseed is firmly held for 19s. 3d. to 19s. 6d. cwt. for Liverpool makes in export casks. Cottonseed is steady, holders of Liverpool refined being firm at 17s. 6d. to 18s. Castor oil is a slow market, good seconds Calcutta now offering at 2⅞ to 2 15/16. First pressure French 2¾d. store, and 2 11/16d. ex-quay. Tallow is dull, and prices tend to favour buyers. Resin is moving quietly without any material change in prices. Spirits of turpentine rather firmer, business having been done at 34s. 3d. cwt. Petroleum is very quiet, but quotations remain 5¼d. to 5¾d. for Russian refined, and 6d. to 7¼d. per gallon for American.

CAKES.—Further arrivals of American Western linseed have again given a quieter tone, and a partial decline of 5s. is quoted, but at the lower rates fair sales have been effected at £5. 13s. 9d. for ordinary makes, whilst sellers of choice quality still ask £6. 5s. per ton. In other imported descriptions there is little animation shown to purchase, but at the same time supplies are small, and values are without material change at £6. 15s. for River Plate, £7. to £7. 3s. 9d. for Bombay, and £7. 7s. 6d. per ton for Russian. There has been a very fair business concluded in Liverpool makes during the past few days, but the value is again partially reduced 2s. 6d, sellers now offering at £7. 12s. 6d. to £8. 10s. per ton, according to brand. There is a steady tone ruling in the market for decorticated cottonseed, with fair sales making in American at recent rates, viz., £5. 10s. to £6., according to quality, whilst Liverpool makes are rather better, with a moderate business doing at £6. 5s. to £6. 15s. per ton, according to brand. For undecorticated Liverpool makes the demand is only moderate in extent, but the range of values is repeated at £4. 15s. to £5. 5s., according to brand, and Egyptian are unaltered at £4. 7s. 6d. to £4. 10s. per ton.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—The prices of oils upon this market have moved up and down a little during the week, but in the main they end about same values as recorded a week ago. The stocks of seed held in Hull month ending March were:—Linseed, 7,928 qrs. against 18,030 qrs. February; whilst the imports for the month had been 44,798 qrs. against February 27,414 qrs. Rape seed: The stock was 7,680 qrs. against February 7,228 qrs.; imports, 18,430 qrs. against February 15,85; qrs. Cottonseed: The stock was 1,450 tons against 570 tons February; imports, 19,358 tons against 27,109 tons February. Linseed oil is steady at 17s. 3d. spot, naked, per cwt.; 17s. to 17s. 1½d. month; 16s. 7½d. May/August; 15s. 10½d. last four months; boiled and refined, £1. to £1. 10s. per ton extra. Refined cotton oil is more inquired for, being quoted 15s. 10½d. spot, naked, per cwt.; 15s 9d. May/August; crude being quoted from 14s. 9d. per cwt., spot; barrels, £1. 10s., and ordinary casks, £1. per ton extra. Castor oil, extracted here, cold drawn pharmaceutical, in barrels, 28s. 6d. per cwt.; in cases, 3 5/16d. per lb.; pure firsts, in barrels, 26s. per cwt.; in cases, 3 1/16d. per lb.; seconds, in barrels, 25s. per cwt.; in cases, 2 15/16d. per lb. Olive oil unchanged; not much offering. Olive oil soap, to arrive, £16. to £18. per ton, c.i.f. Arachide nut oil 26s. per cwt. Oleines unchanged, £18. 10s. to £21. per ton. Cod oil, £16. to £18. per ton. Wool grease very scarce and dear, quoted from £9 per ton.

CAKES.—The market is fairly good, prices being well upheld. Linseed cakes steady: 95% pure, £7. 12s. 6d. to £7. 15s. per ton. Oilcakes (linseed), £6. 12s. 6d. to £6. 15s. Russians, £6. 12s. 6d. to £7s. 5s. Cotton cakes firm: best makes, £5. to £5. 1s. 3d. per ton; seconds, £4. 17s. 6d. to £5.; decorticated, £6. Rape cakes: Black Sea, £4. 5s. per ton.

PAINTS.—A good market; prices unaltered.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

Sulphate of ammonia on the "f.o.b. Leith" quotation has continued to lose rather seriously, and by the end of last week £10. 15s. had been several times taken for prompt. This is the figure that the stronger of the makers are looking for to-day, and lower sellers are not yet known of to a certainty, but very likely they are to be found for the seeking. Makers are now willing to fix forward on easier terms, but the buyers are, if anything, cooler over the matter, and there is no report of anything carried through. Sulphate of copper got considerably stronger and fetched close upon £25., but is rather to the easy side again. There has been an advance in carbonate of ammonia, and prussiate of potash is also firmer. The others are unchanged, but firm generally. Mineral oils and paraffins are steady at about the figures of last week.

Chief prices current are:—Soda crystals, £2. 5s. to £2. 7s. 6d. basis nett, Tyne; soda ash, £4. 2s. 6d. to £4. 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 5s. to £4. 15s. nett, Glasgow; caustic soda, white, 74° £7. 7s. 6d, 70/72° £7., 60/62° £6., and cream 60/62° £6., all nett, Liverpool; bleaching powder, 35/37°, £5. to £5. 10s. nett, Tyne; saltcake, 30s; borax, English refined, £16., and boracic acid, £26. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s., nett, Liverpool; bichromate of potash, 3½d., less 6% for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d., less 6% for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow); chlorate of potash, 3½d., less 5% Liverpool; nitrate of soda, 8s. 6d. to 8s. 9d.; sulphate of ammonia, £10. 15s. 0d., prompt, f.o.b., Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £24. 10s. to £24. 15s., less 5% Liverpool; paraffin scale, hard, 1⅞d. to 2d. per lb., and soft 2d. per lb.; paraffin wax, 120° semi-refined, 2¼d. to 2½d. per lb.; paraffin spirit (naphtha), 9d. to 10d. per gal; paraffin oil (burning), No. 1, 6¼d.; and crystal, 6¾d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 15s. to £5. 5s., 885° £5. 10s. to £6., and 890/895° £6. 5s. to £6. 10s. Week's imports of sugar at Greenock were 8,828 bags beet unrefined.

TYNE CHEMICAL REPORT.

TUESDAY.

Business in chemicals continues quiet, and with practically little or no alteration in prices. Soda crystals £2. 12s. 6d. per ton, gross weight, locally. Sulphur, £4. 15s. per ton. Caustic soda, 70%, £7., and 76/77%, £8. per ton, f.o.b. Tyne.

Bleaching powder, softs, £5. 10s. per ton, nett; do., hards, £5. 15s. per ton, nett; caustic soda: 76/77% £8., and 70% £7. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48% £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do.,

52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do, 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75 Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. 0d. per ton, nett; blanc fixe, £6. 10s. per ton nett; chloride of barium, refined crystals, £6. 15s. 0d. per ton, nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt is steady at 9s. 6d. per ton, f.o.b. Tees, with a fair demand.

COALS.—The coal trade is very firm, and prices all round are fully maintained. Coke is scarce and in strong demand at from 20s. to 23s. per ton. To-day's prices are:—Best Northumbrian steam, 11s. 9d. to 12s. per ton; second qualities, 10s. 9d. to 11s. per ton; small steam, 4s. 9d. to 5s. per ton; gas coals, 10s. to 11s. per ton; bunker coals, 8s. to 8s. 6d. per ton; coke, 20s. to 23s. per ton.

New Companies.

Hull Wool Washing Co., Ltd.—Capital £10,000. in £5. shares. This company has been formed to clean, bleach, comb, and press wool, cotton, hair, silk, worsted, and other fabrics. Registered office, 3, Parliament-street, Hull.

Creosoting & Sleeper Co., Ltd.—Capital £3,000. in £5. shares. This company has been formed to acquire and carry on the business of creosoting timber and buying and selling sleepers recently carried on by the Northern Creosoting and Sleeper Co., Ltd., at Warrington and elsewhere.

Carbide of Calcium Supply Syndicate, Ld.—Capital £15,000. in £1. shares. This company has been formed to adopt a certain agreement, and to carry on the business of manufacturers of and dealers in carbide of calcium and its residual products, cycle makers, motor manufacturers, engineers, machinists, etc. The subscribers to the memorandum of association are:—Baron A. T. de Mouncie, 9, Lilyville-road, Fulham; J. W. Kelly, 25, Queen's Gardens, Ilford, estate agent; W. Pickering, 18, Ironmonger-lane, E.C., secretary; J. C. Walker, 20, Ockenden-road, N., secretary; F. Edwards, 157, Cambridge-street, Warwick Square, S.W., engineer; O. de la Chapelle, 110, Cannon-street, E.C., solicitor; T. Oliver, 34, Crewdson-road, Brixton, clerk. Registered office, 18 and 19, Ironmonger-lane, E.C.

Spencer, Chapman, and Messel, Ltd.—Capital £300,000. in £10. shares (10,000 pref.) This company has been formed to acquire the businesses of Spencer, Chapman, and Co., and Chapman, Messel, and Co., and to carry on the business of chemical manufacturers, ore refiners, and smelters, etc. The subscribers to the memorandum of association are:—S. Chapman, 36, Mark-lane, E.C., chemical manufacturer; D. H. T. Peploe, J.P., Garristone, Weobley; A. W. FitzRoy, 55, Lower Belgrave-street, clerk to the council; R. Messel, 36, Mark-lane, E.C., chemical manufacturer; W. H. Stewart, United Service Club, Pall Mall, retired admiral; Mrs. A. M. Guest, The Cottage, Roehampton; R. H. Lloyd-Anstruther, J.P., D.L., Hintlesham Hall, Ipswich; J. E. Commerell, Kt., 45, Rutland-Gate, S.W., retired admiral. Registered office, 36, Mark Lane, E.C.

Saville's, Ltd.—Capital £20,000. in £1, shares (14,000 6 per cent. cum. pref.) This company has been formed to acquire and carry on the business of chemical manufacturers and merchants carried on as Saville, Ewens and Co., at Cedar Street Works, Hulme, Manchester, Albert Works, Bedminster, Bristol, and St. Ann's Steam Works, Henrietta Road, S. Tottenham, N., and the business of chemical manufacturers carried on by Wortley, Cane and Co., Ltd., at Clifford Street Works, Manchester. The subscribers to the memorandum of association are:—C. H. L. Cazalet, Tanhurst, Dorking, gentleman; E. W. Rowsell, 88, Lansdowne-road, W. Didsbury, brewer's chemist; C. Stansfeld, Birkdale-road, Withington, Manchester, chemist; G. R. Ewens, 13, Belmont-road, West Green, S. Tottenham, chemist; H. C. Ewens, 25, Greville-road, Southville, Bristol, chemist; C. M. Atkins, Selwood, Birkdale-road, Withington, Manchester, secretary; J. S. Hooper, 16, Heald Place, Rusholme, Manchester, clerk. Registered office, Clifford Street Works, Oxford Street, Manchester.

IMPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.

Week ending April 1st.

Acetic Acid—

Holland,	59 pks.	A. & M. Zimmermann
,,	25	R. W. Greeff & Co.

Acetate of Lime—

U. States,	237 bgs.	H. Wallace & Co.
,,	1,840	Lister & Biggs

Acetone—

Holland,	4 dms.	T. H. Lee
Germany,	1	,,

Acids—

Germany,	5 pks.	R. W. Greeff & Co.

Alkali—

France,	5 t.	J. Harrison

Ammonia—

Rangoon,	25 cs.	J. Smither & Sons

Ammonia (Anhydrous)—

Holland,	£40	H. Lorenz

Arsenic—

Melbourne,	60 cks.	W. & S. Bowditch
Portugal,	116 brls.	Coverley & Westray

Barium Sulphate—

Belgium,	17 cks.	J. L. Lyon
	510 bgs.	& Co.

Barytes—

Holland,	302 pks.	W. Harrison
	110 cks.	& Co.

Barytes Carbonate—

Holland,	£25	F. W. Berk & Co.,

Bones—

Melbourne,	6 t.	Culverwell, Brooks & Co.
Adelaide,	2	C. Booth
,,	3	Anning & Cobb
Sydney,	3	A. & W. Nesbitt
Brisbane,	11	Goad, Rigg & Co.

Caoutchouc—

Sydney,	6 c.	H. Devitt & Co.
Belgium,	25	J. Harrison
Straits,	139	E. Boustead & Co.
,,	100	Prop. Bull Wf.
,,	97	Anderson, Weber & Smith
Brazil,	2	W. M. Smith & Sons
Chinde,	144	Hale & Son
Germany,	22	Prop. Bull Wf.
Natal,	10	Brookes & Green
,,	45	Lewis & Peat
Madagascar,	75	Proeter Brs.
France,	8	S. Baker & Co.
Zanzibar,	30	Clarke & Smith
U. States,	18	L. & I. D. Jt. Co.

Castor Oil—

France,	4 brls.	L. & I. D. Jt. Co.
,,	30 cs.	Beresford & Co.
E. Indies,	50	Union L. Co., Ld.
France,	20 cks.	C. Tennant, Sons & Co., Ld.

Caustic Potash—

France,	50 dms.	W. E. Cole
,,	20	Petri Brs.

Chemicals *(otherwise undescribed)*

Belgium,	£8	John Cockerill Line
,,	20	Union L. Co., Ld.
Holland,	31	T. H. Lee
,,	10	A. & M. Zimmermann
Belgium,	1,092	,,
Holland,	7	H. Lorenz
Germany,	7	Drolenvaux & Bremner
Holland,	260	H. Harkness
,,	13	J. Owen
France,	25	,,
Germany,	40	Argo S. S. Co.
,,	356	L. & I. D. Jt. Co.
,,	161	Elkan & Co.
,,	45	J. Norrenberg & Co.
Belgium,	11	T. Ronaldson & Co.
,,	181	Sawyer, Sons & Co.
U. States,	5	A. E. Piggott
Belgium,	70	T. Palmer
,,	300	F. Bowden
Germany,	48	D. C. Thomas & Sons
France,	15	J. Forsey
Belgium,	210	T. H. Lee
Brisbane	120	L. & I. D. Jt. Co.
Germany,	1 bx.	M. D. Co.

Citrate Lime—

Italy,	75 cks.	Thames S. T. & L. Co., Ld.
,,	54	W. C. Bacon & Co.
,,	14	Fellows, Morton & Co.

Coal Products—

Pitch

Germany,	52 brls.	H. Hunt
France,	117 cks.	Poth, Hill & Co.

Cream of Tartar—

France,	3 cks.	B. & F. Wf. Co., Ld.
Spain,	2	C. C. Wf., Ld.
,,	5	B. & F. Wf. Co., Ld.
,,	5	F. C. Devon & Co.
,,	5	W. C. Bacon & Co.

Dyestuffs—

Argols

Italy,	28 pks.	Thames S. T. & L. Co., Ld.

Cochineal

Canaries,	16 bgs.	Sperling & Williams
,,	1	Wilson & Coventry

Cutch

Straits,	5 cs.	L. & I. D. Jt. Co.
U. States,	828 bxs.	H. A. Litchfield & Co.

Extracts

Germany,	5 cs.	L. & I. D. Jt. Co.
,,	5 cks.	T. H. Lee
France,	210 pks.	Beresford & Co.

Gambier

Straits,	458 bls.	Brinkmann & Co.
,,	252 pks.	P. & O. Co.
,,	653 bgs.	Beresford & Co.

Indigo

E. Indies,	5 chts.	W. & S. Bowditch
,,	66	J. W. Cook & Co., Ld.
,,	2	102 pks. J. Owen
,,	34	Croysdale & Co.
,,	70	Parry & Co.
,,	6	Kaltenbach & Schmitz
,,	9	Parsons & Keith
,,	13	Ralli Brs.
,,	18	271 pks. A. B. Curtis & Co.
,,	3	Arbuthnot, Latham & Co.
,,	21	Elkan & Co.
,,	137	P. & O. Co.
,,	397	L. & I. D. Jt. Co.
France,	5	W. & S. Bowditch
Belgium,	1 cs.	John Cockerill Line

Myrabolams

E. Indies,	683 bgs.	Union L. Co., Ld.
,,	5,454	W. Shelcott & Sons
,,	683	Sollas & Sons
,,	2,000 pckts.	P. & O. Co.

Orchella

Portugal,	16 bls.	Prop. Bull Wf.

Shumac

Italy,	500 bgs.	Beresford & Co.
,,	100	W. W. Ware & Co.
,,	125 bls.	Slator & Co.
Germany,	1 ck.	Craven & Co.

Tanners' Bark

Adelaide,	14 t.	J. Greig
Straits,	50	E. Boustead & Co
Natal,	10	Boutcher, Mortimore & Co.
Belgium,	15	Leitch & Co.
,,	45	Lon. & Til. Ltge. C. & D. Co., Ld.
Adelaide,	30	Beresford & Co.
,,	58	Dyster, Nalder & Co.
,,	1	T. J. & T. Powell
,,	91	H. Devitt & Co.
Natal,	19	Flack, Chandler & Co.
,,	95	J. T. Rennie, Son & Co.
France,	1	Prop. Bull Wf.
Auckland,	15	G. H. Penney & Co.

Tumeric

E. Indies,	42 bgs.	H. Devitt & Co.
,,	10	Perkins & Homer
Cochin,	259	J. P. Alpe & Co.
,,	28	H. A. Litchfield & Co.

Valonia

A. Turkey,	60 t.	M. D. Co.
,,	20	H. Cole
,,	70	Adam Brs.

Dyestuffs *(otherwise undescribed)*

France,	2 pks.	E. Flageollet & Co.

Farina—

Germany,	50 bgs.	J. Laing, Son & Co.
U. States,	2,665	Gardiner & Tiny

Glucose—

Germany,	50 pks.	500 c.	Beresford & Co.
,,	13	105	M. D. Co.
,,	13	100	J. Knill & Co.
U. States,	100	600	R. Bennett & Co.

,,	100	500	Lucas & Spencer's Wf., Ld.
,,	50	315	A. B. Curtis & Co.
,,	50	300	R. Johnson & Co.
,,	250	250	Trier. Meyer & Co.
,,	250	250	Beresford & Co.
,,	590	500	C. Mangold & Co.
,,	2,250	2,250	Beck & Pollitzer
,,	350	834	Ohlenschlager Brs.
,,	12,398	32,229	R. G. Hall & Co
,,	100	580	L. Norman & Co., Ld.
,,	600	3,600	W. Grose & Co.
,,	50	288	A. E. Piggott
,,	100	600	Page, Son & East
,,	1,610	2 133	Ginner, Morton & Co.
,,	100	600	E. & T. Pink

Glue—

Germany,	£180	Beresford & Co.
France,	240	Lon. & Til. Ltge. C. & D. Co., Ld.
Germany,	209	L. & I. D. Jt. Co.
,,	35	Butler's Wf., Ld.
,,	300	Netherlands S.S. Co.
U. States,	91	B. Gallaway
Belgium,	35	Leach & Co.
Holland,	32	T. H. Lee
Belgium,	14	,,
,,	800	T. M. Duche & Sons
France,	1,385	,,
,,	212	Burnett Brs. & Sons

Glycerine—

Adelaide,	£190	Beresford & Co.

Guano—

Seychelles,	600 t.	D. de Pass & Co.

Gutta Percha—

Straits,	240 c.	Kleinworth, Sons, & Co.
,,	1,050	H. W. Jewsbury & Co.
,,	100	P. & O. S. N. Co.
,,	38	Huttenbach & Co.
W. Indies,	19	Gillespie Brs. & Co.
,,	5	Anderson, Weber, & Smith

Litharge—

Germany,	11 cks.	Butler's Wf., Ld.
,,	3	Petri Brs.
,,	4	H. Lambert

Magnesia—

Holland,	5 cs.	A. & M. Zimmermann

Manure—

Germany,	30 t.	Perkins & Homer

Methyl Alcohol—

Germany,	1,350 g.	Lister & Biggs
,,	6,200	T. Jones & Co.
,,	5 brls.	R. Ryding
U. States,	3,700 g.	Lister & Biggs
,,	52 dms.	H. Wallace & Co.
France,	20	E. Catlin

Molasses—

U. States,	400 cks.	2,486 c.	J. Forsey
,,	530	3,084	Ohlenschlager Brs.
Germany,	200	1,140	J. R. Francis & Co., Ld.
W. Indies,	3 pns.	30	Wilkinson & Gaviller

Ochre—

France,	6 cks.	Sollas & Sons
,,	228	W. Harrison & Co.
,,	53 pks.	J. L. Lyon & Co.
Holland,	8 cks.	Phillipps & Graves
Germany,	14	Wilkinson, Heywood, & Co.
U. States,	84 brls.	Binney & Smith

Paraffin Wax—

U. States,	600 cs.	Anglo-American Oil Co.
,,	300	Beresford & Co.
,,	300 brls.	H. Hill & Sons

Phosphates—

France,	270 t.	Anglo-Contl. Guano Works
,,	200	J. Harrison
,,	245	A. Hunter & Co.
Belgium,	250	D. de Pass & Co.
,,	205	Lawes Chemical Manure Co.
Bona,	800	Pickford & Winkfield

Plumbago—

Germany,	33 cks.	Butler's Wf., Ld.
Ceylon,	187 brls.	J. Forsey
,,	59	Wrightson & Son
,,	168	G. R. Haller & Co.
,,	148	Marshall & French
,,	104	Hett & Field

Potash—

France,	15 cks 50 drs.	Lon. & Til. Ltge. C. & D. Co.

Potassium Bicarbonate—

Holland,	12 cks.	A. & M. Zimmermann

Potassium Carbonate—

France,	2 t.	J. A. Reid
Germany,	30	J. M. Steel & Co.
,,	2	M. Dk. Co.
,,	12	Petri Brs.
,,	10	Charles & Fox
,,	10	H. Lambert
Holland,	12 cks.	J. Owen

Potassium Chlorate—

Belgium,	20 kgs.	E. Allen

Potassium Muriate—

Germany,	500 bgs.	Perkins & Homer
,,	500	Bessler, Waechter, & Co.

Potassium Sulphate—

Belgium,	1 ck.	Sawyer, Sons, & Co.

Red Lead—

Germany,	3 cks.	Haeffner, Hilpert, & Co.
,,	19	H. Lambert
Holland,	34	Burrell & Co.
,,	35	J. Matton

Salicylic Acid—

Germany,	2 pks.	Butler's Wf., Ld.

Saltpetre—

Germany,	3 cks.	J. Hall & Son, Ld.
,,	40	Curtiss & Harvey, Ld.
,,	16 brls.	L. & I. D. Jt. Co.
,,	16	P. Hecker & Co.
E. Indies,	1,310 bgs.	Lucas & Spencer's Wf.

Sheep Dip—

Cape,	12 cs.	L. & I. D. Jt. Co.

Soda—

Holland,	1 t.	J. Barber & Co.

Soda Ash—

Belgium,	20 t.	F. Claydon & Co.

Sodium Hypochlorite—

Germany,	200 cs.	H. Lambert

Sodium Nitrate—

Chile,	12,481 bgs.	Anglo-Contl. Guano Works

Sodium Sulphate—

Belgium,	23 cks.	Deering & Robottom

Starch—

Holland,	50 cs.	Phillipps & Graves
,,	350	Little & Johnston
,,	40	T. H. Lee
Belgium,	360	Becker & Wagner
,,	61	Leach & Co.
,,	300	C. Tennant, Sons, & Co.
,,	36	Pearce, Duff, & Co.
,,	40	Taylor Brs.
,,	236	T. H. Lee
,,	453	F. Claydon & Co.
,,	120	J. Harrison
France,	475	E. & T. Pink
Germany,	80	Argo S. S. Co.
,,	6 cks.	Butler's Wf., Ld.
U. States,	200 bgs.	R. G. Hall & Co
,,	125	F. Claydon & Co.
,,	2,665	C. Tennant, Sons, & Co.

Stearine—

Belgium,	286 bgs.	H. Hill & Sons
France,	109	,,

Sulphur—

Spain,	350 t.	J. Forster

Sulphur Chloride—

Holland,	£27	Typke & King

Sulphuric Acid—

Holland,	£75	Netherlands S. B. Co.

Tallow—

N. Zealand,	35 cks.	J. Groves
,,	35	Brown & Elmslie
Holland,	3	J. Barber & Co.
Queensland,	29	Perkins & Homer
,,	8	Anning & Cobb
,,	94	Mordaunt Brs.
,,	125	Cuthbert & Hall
,,	11	Goad, Rigg, & Co.
Melbourne,	131	Phillipps & Graves
,,	48 pks	W. France & Co., Ld.
,,	263 cks.	Elkan & Co.
,,	65	H. Lamber t
E. Indies,	50	Culverwell, Brooks, & Co.
Sydney,	25	J. Allen & Co.
,,	52	Hoare, Wilson, & Co.
,,	68	W. France & Co., Ld.
Adelaide,	292	Elkan & Co.
U. States,	240 trcs.	Colchestner & Woolner
,,	126	W. Balchin, Ld.
,,	175 brls.	J. W. Cook & Co., Ld.
Ceylon,	5 hds.	Beresford & Co.

Tar—

Channel Is.,	588 brls.	Burt, Boulton, & Co.
Germany,	240	Linck, Moeller, & Co.

Tartaric Acid—

Belgium,	4 pks.	B. & F. Wf. Co., Ld.
Holland,	—	Kirkpatrick, Barr, & Co.

Ultramarine—

Belgium,	4 brls.	Wilkinson, Heywood, & Co.
,,	4 cks.	Taylor Brs.
Holland,	1	W. Harrison & Co.
,,	4	J. Owen
,,	13 cs.	Haeffner, Hilpert, & Co.
Germany,	12 cks.	T. H. Lee

Varnish—

U. States,	10 pks.	Blundell, Spence, & Co.
,,	76	Taylor Brs.
,,	36	Atlantic Transport Co., Ld.

Verdigris—

France,	1 ck.	H. Lorenz

White Lead—

Belgium,	56 brls.	T. & W. Farmiloe, Ld.
,,	80 cks.	Perkins & Homer
,,	13	J. L. Lyon & Co.
Holland,	20	J. R. Francis & Co.
Germany,	63	Wilkinson, Heywood, & Co.

Wolfram Ore—

Australia,	12 t.	J. Blyth & Co.
,,	1	J. C. Lanyon & Sons

Wood Pulp—

Norway,	56 pks.	J. Sharp
,,	250	Tough & Henderson
Sweden,	170	J. W. Cook & Co., Ld.
Denmark,	250	Johnsen & Jorgensen
Holland,	50	H. B. Wood
,,	78	Thames S. T. & L. Co., Ld.
Canada,	1,742	A. E. Reed & Co.
U. States,	5,195	Henderson, Craig, & Co.

Zinc Oxide—

U. States,	500 brls.	M. Ashby, Ld.
Holland,	40	,,
,,	25 cks.	Burrell & Co.
,,	63	J. Matton
Belgium,	30	,,
Germany,	500	Soundy & Sons

Zinc White—

Belgium,	50 brls.	Petri Brs.
Germany,	20 cks.	H. Lambert

LIVERPOOL.

Week ending March 30th.

Barytes—

Antwerp,	136 cks.	150 bgs.
Rotterdam,		150

Bones—

Maranham,	150 bgs.	Hugh Evans & Co.

Chemicals *(otherwise undescribed)*

Rotterdam	2 cks.	3 cs.

Chrome Ore—

Syra,	400 t.	Geo. G. Blackwell, Sons & Co.
Smyrna,	140 bgs.	

Colours—

Antwerp,	3 cks.	
Rotterdam,	1	
Stettin,	50	

Cottonseed Oil—

New York,	1,075 brls.	

Cream of Tartar—

Bordeaux,	14 cks.	
St. Nazaire,	1	

Dyestuffs—

Cochineal

W. C. Africa,	30 bgs.	Roberts, Evans & Co.

Cutch

Rangoon,	1,183 bxs.	

Extract

Havre,	10 cks.	Cunard S. S. Co.
St. Nazaire,	260	
Rouen,	180	Co.-op. W'sale Society, Ld.
Baltimore,	60 brls.	

Shumac

Palermo,	1,750 bgs.	122 bls.

Tannin Extract

Ghent,	20 brls.	

Valonia

Syra,	769 bgs.	L. J. Vuenaras & Co.
Smyrna,	227	150 t. Barry Brs.
,,	606	20

Dyewood Extract—

New York,	200 brls.	M'Arthur & Co.

Glucose—

Newport News,	250 brls.	

Glue—

Boston,	10 kgs.	6½ brls. J. L. Duguid & Co.
St. Nazaire,	6 cks.	30 cs.
Rouen,	28	Co-op. W'sale Society, Ld.
Rotterdam,	140 bgs.	
Hamburg,	20	

Manganese—

Hamburg,	13 cks.	

Manganese Ore—

Milos,	2,800 t.	Darwen & Mostyn I. Co.

Manure—

Karachi,	2,750 bgs.	

Mica—

New York,	12 cs.	House & Co.

Molasses—

N. Orleans,	3,100 brls.	

Ochre—

Rouen,	19 cks.	Co-op W'sale Society, Ld.

Oxalic Acid—

Rotterdam,	4 cks.	

Paint—

New York,	10 brls.	Anglo-Am. Oil Co.
,,	6 cs.	
Rotterdam,	26 dms.	

Paraffin Scale—

New York,	1,744 brls.	Anglo-Am. Oil Co.

Phosphates—

Brunswick,	1,012 t.	
Pt. Royal,	3,120	
Ghent,	1,000 bgs.	

Potash—

Halifax,	32 brls.	S. W Rayse & Co.
Constantinople,	6 cks.	
Dunkirk,	20 dms.	Bancroft & Co.

Potassium Carbonate—

Rouen,	107 cks	Co-op. W'sale Society, Ld.

Pyrites—

Huelva,	1,704 t.	Mathieson & Co.

Red Lead—

Rotterdam,	28 cks.	

Rosin—

New York,	1,000 brls.	
Baltimore,	250	

Saltpetre—

Hamburg,	20 kgs.	

Soap—

Smyrna,	200 bxs.	
Rotterdam,	2 cs.	
Boston,	5	Elder, Dempster & Co.
,,	5 cs.	
Hamburg,	10 bls.	
Naples,	160	

Soap Stock—

New York,	427 brls.	
Leghorn,	50	Brown Brs. & Co.

Soapstone—

Bordeaux,	350 bgs.	Geo. G. Blackwell, Sons & Co.

Sodium Nitrate—

Iquique,	27,789 bgs.	

Starch—

Antwerp,	185 cs.	J. T. Fletcher & Co.
,,	738	
Bremen,	180	
Rotterdam,	40	
New York,	10 brls.	Oswego Starch Fcty.
Hamburg,	7	
Baltimore,	400 bgs.	

Stearine—

Rouen,	70 bgs.	Co-op. W'sale Society, Ld.

Rotterdam, 7 bls.
Antwerp, 13 bgs. J. T. Fletcher & Co.

Sulphur—
Catania, 80 bgs. 29 cks. 107 brls.

Tallow—
Halifax, 238 cks. H. Cook & Co.
New York, 200 hds. M. M. Shuthy & Co.
" 1 hx. 1 pk.

Tartaric Acid—
Messina, 8 cks.

Ultramarine—
Rotterdam, 16 cks.

Varnish—
New York, 10 brls. W. A. Warren
" 6 cs.

Waste Salt—
Hamburg, 608 bgs.

White Lead
Rotterdam, 43 cks.

Wood Pulp—
Drammen, 24 cs. L. S. Dixon & Co.
Halifax, 2,684 bls. A. Rice & Co.
Gothenburg, 82
" 17 G. F. Green & Co.

Zinc Oxide—
New York, 50 brls.
Antwerp, 1 ck. 25

Zinc White—
Rotterdam, 8 cks.
Hamburg, 5

MANCHESTER.

Week ending April 1st.

Acetate of Lime—
New York, 300 bgs.

Alizarine—
Rotterdam, 53 cks. 1 cs.

Alumina—
Hamburg, 1 ck.

Ammonium Oxalate—
Hamburg, 1 ck.

Antimony—
Treport, 2 cks.

Antimony Salt—
Rotterdam. 20 cks.

Barium Nitrate—
Antwerp, 50 cks.

Barytes—
Antwerp, 200 bgs.
Rotterdam, 36 cks. 50 bgs.

Bleaching Powder—
Treport, 40 bgs.

Calcium Carbide—
Treport, 20 t.

Caustic Potash—
Treport, 21 dms.

Chemicals *(otherwise undescribed)*
Rotterdam, 11 cks.
Rouen, 41

Coal Products—
Aniline Salt
Rotterdam, 4 cks.

Colours—
Hamburg, 11 cks. 3 cs.
Rotterdam, 102 27 5 bxs 50 brls. 2 pks.
Rouen, 6

Cream of Tartar—
Rotterdam, 2 cks.

Dyestuffs—
Extract
St. John, N.B., 220 cks.
Tannin Extract
Rouen, 10 cks.

Farina—
Rotterdam, 950 bgs.
Stettin, 3,840 bgs. Browne, Geveke, & Co.
" 1,150

Glucose—
St. John, N.B., 650 brls.
Stettin, 1,200 bgs.

Glue—
Rotterdam, 5 bgs. 7 cs.
Rouen, 21 60 bls. 44 cks. 1 pk.
Stettin, 80 bgs.

Lead Acetate—
Hamburg, 5 cks.

Litharge—
Rotterdam, 7 cks.

Naphtha (Wood)—
Treport, 20 cks.

Ochre—
Rouen, 10 cks.

Oxalic Acid—
Rotterdam, 30 cks.

Paraffin Scale—
New York, 392 brls. 110 cs.

Potash—
Antwerp, 25 cks.
Hamburg, 19 41 dms.
Rotterdam, 9

Potassium Carbonate—
Rouen, 5 cks.

Potassium Prussiate—
Antwerp, 4 cks.
Rouen, 2

Pyrites—
Huelva, 1,727 t. Beauford & Co.

Salammoniac—
Antwerp, 5 brls.

Soap—
Rotterdam, 4 cs.

Sodium Nitrate—
Rotterdam, 4 cks.

Starch—
Hamburg, 130 cks. 300 cs.
New York, 200 bgs.
Rotterdam, 100
St. John, N.B., 5,700

Stearine—
Antwerp, 13 bgs.
Rotterdam, 13 bls.

Sulphuric Acid—
Rotterdam, 10 cks.

Tallow—
New York 300 trcs. 50 hds.

Tartaric Acid—
Rotterdam, 11 cks.
Rouen, 30 cs.

Ultramarine—
Hamburg, 4 cks 3 cs.
Rotterdam, 10

White Lead—
Rotterdam, 4 cks.

Wood Pulp—
Christiania, 2,700 bls. W. H. Ingram
Drontheim, 3,482 W. H. Stott & Co.
Hamburg, 15
Porsgrund, 1,750 Felber, Jucker, & Co.
Rotterdam, 7 crts. 14 pks.
Skien, 2,663 bls. W. H. Ingram
Stettin, 21
St. John, N.B., 15,666⅔

Zinc Oxide—
Antwerp, 10 cks. 46 brls.
New York, 100

Zinc White—
Rotterdam, 20 cks. 125 brls.

HULL.

Week ending April 1st.

Acids—
Rotterdam, 4 cks. Hull & Netherlands S. S. Co

Barytes—
Antwerp, 34 cks. Bailey & Leetham, Ld.
" 50 bgs. Leetham, Ld.
" 105 cks. H. F. Pudsey
Bremen, 20 G. Holmes & Co.
" 38 Sissons Brs. & Co.
Rotterdam, 65 Hull & Netherlands S S. Co.

Beta Naphthol—
Rotterdam, 2 cks. Hull & Netherlands S. S. Co.

Borax—
Hamburg, 14 cks.

Chemicals *(otherwise undescribed)*
Antwerp, 15 pks. Wilson, Sons, & Co., Ld.
Bari, 20 cks. "
Hamburg, 20
Stockholm, 10

Coal Products—
Alizarine
Rotterdam, 46 pks. Hull & Netherlands S. S. Co.
4 brls.
Aniline
Rotterdam, 60 pks. Hull & Netherlands S. S. Co.

Creosote Salts
Rotterdam, 24 cks. Hull & Netherlands S. S. Co.

Pitch
Hamburg, 52 cks.

Tar
Hamburg, 10 brls. Wilson, Sons, & Co., Ld.

Colours—
Amsterdam, 2 cs. Hull & Netherlands S. S. Co.
Antwerp, 11 pks.
Bremen, 1 ck. Veltmann & Co
Fiume, 10 bgs.
Ghent, 28 brls.
Hamburg, 4 cks.
Rotterdam, 20 5 cs. Hull & Netherlands S. S. Co. 37 pks.
Stettin, 10 cks. Wilson, Sons, & Co., Ld.

Dyestuffs—
Extracts
Trieste, 36 brls. Wilson, Sons, & Co., Ld.
Shumac
Palermo, 602 bls. Wilson, Sons, & Co., Ld.
Trieste, 281 "

Farina—
Hamburg, 50 bgs. Bailey & Leetham, Ld.
Harlingen, 50 bls. Hull & Netherlands S. S. Co.
Stettin, 400 bgs. Wilson, Sons, & Co., Ld.

Glucose—
New York, 348 brls. Wilson, Sons, & Co., Ld.

Glue—
Christiansund, 1 ck. Wilson, Sons, & Co., Ld.
Rotterdam, 15 bgs. Hull & Netherlands S. S. Co.
Rouen, 6 cks.
Trieste, 20 brls. Wilson, Sons, & Co., Ld.

Lead Acetate—
Hamburg, 7 cks. Bailey & Leetham, Ld.

Linseed Oil—
Amsterdam, 614 brls. Hull & Netherlands S. S. Co.

Litharge—
Rotterdam, 7 cks. Hull & Netherlands S. S. Co.

Manganese—
Rotterdam, 9 cks. Hull & Netherlands S. S. Co

Paraffin Wax—
New York, 66 brls.

Phosphates—
Coosaw, 1,600 t.
Ghent, 1,210 bgs.
" 150 t.

Soap—
New York, 350 bxs.

Soda—
Ghent, 100 bgs.

Sodium Sulphate—
Rotterdam, 1 bx. Hull & Netherlands S. S. Co.

Starch—
Amsterdam, 40 cs. Hull & Netherlands S. S. Co.
20 bgs.
Antwerp, 20 "
Bremen, 1,372 Veltmann & Co.

Sulphur—
Catania, 10 cks. Wilson, Sons, & Co., Ld.
650 bgs.
" 134 brls.

Tallow—
Antwerp, 2 cks. Wilson, Sons, & Co., Ld.
Copenhagen, 50 brls. "
New York, 180 cks. "
Stockholm, 10

Tartaric Acid—
Rotterdam, 2 cks. Hull & Netherlands S. S. Co.

Ultramarine—
Rotterdam, 4 cks. Hull & Netherlands S. S. Co.

Varnish—
Antwerp, 5 brls. Wilson, Sons, & Co., Ld.

White Lead—
Antwerp, 49 cks. Bailey & Leetham, Ld.
Rotterdam, 62 Hull & Netherlands S. S. Co.

Wood Pulp—
Christiania, 1,116 bls. Wilson, Sons, & Co., Ld.
Drontheim, 120 "
Gothenburg, 1,238 "
Hamburg, 120 Bailey & Leetham, Ld.
" 40 pks. Wilson, Sons, & Co, Ld.

GLASGOW.

Week ending April 6th.

Barium Chloride—
Rotterdam, 4 cks. J. Rankine & Son

Barytes—
Rotterdam, 106 cks. J. Rankine & Son
Hamburg, 11 cks. 10 bgs.

Bleaching Powder—
Rotterdam, 65 cks. J. Rankine & Son

Chemicals *(otherwise undescribed)*
Amsterdam, 1 cs. J. Rankine & Son
" 1

Coal Products—
Alizarine
Rotterdam, 52 cks. J. Rankine
127 brls. & Son
Aniline
Rotterdam, 7 cks. J. Rankine & Son
Amsterdam, 2 "

Colours—
Rotterdam, 16 cks. 1 cs. J. Rankine
11 bxs. 3 brls. & Son
Hamburg, 13 cks. 1 cs.

Dyestuffs—
Cutch
Rangoon, 1,035 bxs P. Henderson & Co.

Farina—
Delfszyhl, 100 bgs. J. Rankine & Son

Glucose—
Baltimore, 250 brls.

Glue—
Rotterdam, 20 bgs. J. Rankine & Son
Hamburg, 4 cks 10 bgs.
Antwerp, 5 10 bls.

Glycerine—
Rangoon, 13 dms. P. Henderson & Co.

Oxalic Acid—
Rotterdam, 16 cks. J. Rankine & Son

Paraffin Scale—
Rangoon, 474 bxs. P. Henderson
495 cs. & Co.

Phosphates—
Antwerp, 1,000 bgs.

Potassium Nitrate—
Hamburg, 20 cks.

Pyrites—
Huelva, 1,807 t. Tharsis Co.
Saltwick 2,066 "

Rosin—
Baltimore, 250 brls.

Soap—
Rotterdam 4 cs. J. Rankine & Son
Philadelphia, 11
Baltimore, 134 brls.

Starch—
Rotterdam, 13 cs. J. Rankine & Son
Baltimore, 500 bgs.

Stearine—
Amsterdam, 121 bgs. J. Rankine & Son

Tallow—
Philadelphia, 150 tcs.

Tartaric Acid—
Rotterdam, 4 cks. J. Rankine & Son

Waste Salt—
Hamburg, 303 t. 2,250 bgs. 249 cks.

White Lead—
Rotterdam, 20 pks. J. Rankine & Son

Wood Pulp—
Drontheim, 410 bls.
Christiansand, 100

Zinc White—
Rotterdam, 25 cks. J. Rankine & Son

TYNE.

Week ending April 1st.

Ammonia—
Rotterdam, 1 cs. Tyne S. S. Co.
Chemicals (*otherwise unaescribed*)
Hamburg, 2 cs. Tyne S. S. Co.
Colours—
Hamburg, 5 cs. Tyne S. S. Co.
Copper Sulphate—
Amsterdam, 3 cks. W. Swanston & Sons
Glucose—
New York, 850 brls. Furness, Withy, & Co.
Paint—
Christiania, 28 kgs. P. H. Matthiessen & Co.
Paraffin Scale—
New York, 2,565 brls. C. Hassell & Son
Phosphates—
Antwerp, 300 t. Langdale's Chemical M. Co.
Treport, 520
Pyrites—
Huelva, 1,965 t. Tharsis Sulphur & Copper Co.
Red Lead—
Christiania, 2 cks. P. H. Matthiessen & Co
Soap—
Rotterdam, 3 cs. Tyne S. S. Co.
Starch—
Rotterdam, 40 cs. Tyne S. S. Co.
Tartaric Acid—
Rotterdam, 12 cks. Tyne S. S. Co.
Wood Pulp—
Bergen, 7 bls.
Christiania, 570 P. H. Mattiessen & Co.
Zinc Oxide—
New York, 100 brls. Furness, Withy, & Co.

GOOLE.

Week ending March 29th.

Alkali—
Calais, 3 cks.
Antimony—
Boulogne, 6 cks.
Barytes—
Rotterdam, 150 bgs.
Caoutchouc—
Boulogne, 11 cks. 2 cs.
Coal Products—
Alizarine
Rotterdam, 1 cks. 2 cs.
Aniline
Rotterdam, 341 cks. 54 cs.
Colours—
Hamburg, 40 cks. 11 cs.
Dyestuffs (*otherwise undes.*)**—**
Amsterdam, 2 cks. 1 cs.
Boulogne, 31 30 pks.
Rotterdam, 5
Farina—
Delfszyhl, 400 bgs.
Hamburg, 800
Rotterdam, 100
Glue—
Boulogne, 2 cks. 5 bs.
Dunkirk, 44 cks. 50 bgs.
Hamburg, 10
Ochre—
Calais, 40 cks.
Phosphates—
Ghent, 808 bgs.
Plumbago—
Boulogne, 1 ck.
Potash—
Calais, 65 dms
Dunkirk, 6 cks. 38 cks. 76
Hamburg, 41
Pyrites—
Huelva, 2,272 t.
Saltpetre—
Hamburg, 4 cks.
Rotterdam, 200 bgs.
Starch—
Rotterdam, 20

GRIMSBY.

Week ending April 1st.

Caoutchouc—
Antwerp, 1 cs.
Hamburg, 6
Rotterdam, 1 1 bs.
Chemicals (*otherwise unaescribed*)
Antwerp, 9 blns.
Hamburg, 9 cks. 6 cs.
Colours—
Antwerp, 2 cks. 48 pks.
Hamburg, 7 172 16 cs. 20 dms.
Farina—
Hamburg, 200 bgs.
Indigo—
Hamburg, 6 cs.
Rotterdam, 3 chts.
Salt—
Hamburg, 2,001 bgs.

EXPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending April 5th.

Ammonia—
Dunedin, 6 c. £12
Durban, 5 cs. 13
Ammonia (Anhydrous)—
Stockholm, 35 cyldrs. £220
Ammonium Carbonate—
B. Ayres, 1 t. £31
Ammonium Chloride—
New York, 5 t. 4 c. £107
Ammonium Muriate—
Reval, 2 t. £35
Ammonium Sulphate—
Samarang, 61 t. £671
Tegal, 104 1,144
Sourabaya, 404 4,444
Pecalongan, 293 3 233
Valencia, 25 15 c. 260
Havre, 81 cks. 340
Colombo, 4 3 50
St. Lucia, 10 2 125
Cullera, 332 2 3,520
Marseilles, 20 5 220
Martinique, 85 893
Dunkirk, 195 2 2,071
Bremen, 9 59
Rotterdam, 50 525
Ostend, 230 2,466
Newport News, 100 10 1.050
Arsenic—
Amsterdam, 15 cks. £50
Barium Nitrate—
Calcutta, 1 c. £18
Chemicals (*otherwise undescribed*)
New York, 15 c. £149
Frankfort, 8 cks. 34
Paris, 10 brls. 26
Fremantle, 13 pks. 24
Hamburg, 13 22 47
E. London, 5 19
Pt. Elizabeth, 32 cs. 46
Cette, 39 66
Jamaica, 9 12
Citric Acid—
Wellington, 3 c. £21
Reval, 2 t. 10 332
Hamburg, 1 10 173
Wellington, 1 7
Coal Products—
Anthracene
Cologne, 240 cks. £330
Carbolic Acid
Cologne, 16 t. 6 c. £325
Auckland, 3 cs. 8
Mauritius, 100 dms. 33
Creosote
Paris, 25 cks. £47
Creosote Salts
Philadelphia, 1,096 bgs. £302
Seville, 4,033 brls. 3,025
Naphtha
Melbourne, 50dms. £30
Dunedin, 81 31
Naphthaline
Batavia, 46 cks. £51
Paris, 150 pks. 144
Amsterdam, 26 21
Brussels, 3 26
New York, 16 148 179
Aden, 5 11
Hamburg, 16 139
Stettin, 12 46
Rotterdam, 16 23
Algoa Bay, 8 cs. 21
Tientsin, 21 60
Pitch
New York, 200 cks. £51
Dunkirk, 105 t. 130
Chautenay, 1,340 1,670
Alexandria, 200 brls. 57
Antwerp, 852 983
Tar
Hamburg, 250 brls. £113
Adelaide, 50 dms. 9
Gibraltar, 4 6
Copper Sulphate—
Treport, 15 t. 3 c. £360
Rotterdam, 240 cks. 970
Wellington, 10 12
Cream of Tartar—
Wellington, 10 c. £46
Manure—
Adelaide, 100 t. £293
Barbadoes, 50 475
Colombo, 8 63
St. Lucia, 20 200
Cullera, 252 10 c. 710
Martinique, 60 425
Cape Town, 22 6 12 cs. 64
Rotterdam, 18 15 120
Oxalic Acid—
Melbourne, 3 t. £89
Potassium Chlorate—
Calcutta, 1 c. £33
Potassium Cyanide—
Natal, 50 cs. £548
Charters Towers, 5 t. 528
E. London, 15 1,601
Sarawak, 25 280
Auckland, 10 75 1,797
Melbourne, 2 229
Delagoa Bay, 5 145 1,926
Potassium Muriate—
Havre, 54 cks. £105
Potassium Sulphate—
Colombo, 27 cks. 7 t. 14 c. £133
Saltpetre—
Napier, 10 c. £10
Amsterdam, 2 t. 5 57
Syra, 3 82
Sheep Dip—
B. Ayres, 10 t. 15 c. £380
Potassium Prussiate—
Boston, 10 t. 2 c. £535
Antwerp, 5 1 236
Strontium Nitrate—
Calcutta, 1 c. £27
Sulphur—
Lisbon, 450 brls £312
Tartaric Acid—
Fremantle, 1 cs. £6
Bagdad, 6 c. 35
Wellington, 5 28

LIVERPOOL.

Week ending April 5th.

Acetic Acid—
Vera Cruz, 1 t. 7 c. 2 q. £28
Alum—
Jetuan, 1 t. 10 c. 1 q. £7
Madras, 7 7 3 41
Piræus, 4 14 1 27
Samarang, 26 16 2 131
Ammonium Carbonate—
Constantinople, 2 c. £3
Hamburg, 10 2 q. 15
Naples, 10 13
Lisbon, 6 9
Barcelona, 2 t. 4 67
Ammonium Muriate—
Marseilles, 1 t. £18
Barcelona, 2 16 c. 56
Melbourne, 8 cks. 38
Ammonium Sulphate—
Alicante, 10 t. 3 c. £112
Valencia, 408 1 4,190
Palermo, 10 110
Cevita Vecchia, 10 110
Gd. Canary, 10 10
Cullera, 56 18 620
New York, 200 10 2,142
Antimony Sulphide—
New York, 2 t. 2 c. 3 q. £120
Providence, 11 2 90
Barium Binoxide—
Osaka, 1 t. 10 c. £55
Basic Slag—
Pomaron, 100 t. £193
Bleaching Powder—
Alexandria, 20 cks.
Cambrai, 18
Fiume, 16
Genoa, 58
Havana, 20 brls.
Johnsonburg, 73
Kobe, 100 bxs.
Leghorn, 30
Middletown, 21
Newfairwater, 28
New York, 154 29
Philadelphia, 141
Rio de Janeiro, 38
Stettin, 35
Boracic Acid—
Rotterdam, 4 c. £5
Antwerp, 10 7
Hamburg, 1 t. 11 2 q 41
Borax—
Gothenburg, 2 t. 9 c. 2 q. £38
Valparaiso, 5 1 5
Rotterdam, 4 6 90
M. Video, 11 3 10
Hamilton, 11 6 1 193
Pasages, 10 3 9
Antwerp, 3 17 54
Berlin, 31 8 2 508
Hamburg, 1 17
Calcium Chloride—
Colombo, 2 t. 13 c. £6
Brisbane, 4 19 11
Rouen, 10 22
Castor Oil—
Accra, 8 cs.
Caustic Soda—
Alexandria, 95 dms.
Antwerp, 32 13 cks.
Barcelona, 208 50 brls.
Brisbane, 91
B. Ayres, 85
Calcutta, 175
Catania, 36
Corunna, 15
Dunedin, 30
E London, 65
Fairwater, 14
Fiume, 28
Genoa, 311
Hamburg, 71
Havana, 5
Hiogo, 819
Iquique, 69
La Guayra, 30 2
Leghorn, 53
Malaga, 40
Marseilles, 105
Monterey, 60
M. Video, 25
Montreal, 23 cs. 2 crts.
Nagasaki, 200
Naples, 42
N. Orleans, 50
Oporto, 15
Para, 30
Porto Alegre, 80
Rosario, 18
San Sebastian, 90
Santos, 60
Sao Paulo, 130
Sydney, 10 cks.
Tarragona, 65
Trieste, 53
Trinidad, 16
Valencia, 50
Valparaiso, 10
Yokohama, 100
Chemicals (*otherwise undescribed*)
Johannesburg, 3 t. £300
Alexandria, 20 brls. 06
Madras, 10 48
New York, 20 4 c. 521
Verna, 6
Galatz, 15
Melbourne, 1 11
Genoa, 4 11

Antwerp, 4 19 1 q. 76
Rotterdam, 1 10 9
Barcelona, 24 cks. 15 17 1 512
Chicago. 9 2 228

China Clay—
Baltimore, 350 cks.
Barcelona, 60 bgs.
Bombay, 248
Boston, 730
Calcutta, 120
Genoa. 110
New York, 600
Philadelphia, 300
Portland, M., 524

Chromium Acetate—
Naples, 2 cks. £30

Citric Acid—
Hong Hong, 2 c. 1 q. £14

Coal Products—
Aniline Colour
New York, 34 cks. 1 cs.
Canada, 1
Aniline Dye
Barcelona, 3 cs.
Aniline Salt
Boston, 55 cs.
Genoa, 5 cks.
Carbolic Acid
Rotterdam, 4 t. 19 c. £304
Milan, 2 3 q. 133
Florence, 10 3 36
Rio de Janeiro 1 18 10
M. Video, 4 17
Hamburg, 4 19 3 300
Rosario, 2 2 11
Rouen, 5 8 320
Creosote
Bordeaux. 250 cks.
Creosote Oil
Bordeaux. 254 cks.
Naphtbaline
Antwerp, 140 bgs.
Bordeaux. 223
Pitch
Galatz, 25 brls.
Genoa, 20 cks.
Tar
Galatz, 10 brls.
Ibrail, 30
Sierra Leone, 20 kgs.
Sulina, 8 dms.
Valparaiso, 400

Copperas—
Madras, 2 t. 5 c. £5
Vera Cruz, 2 16 2 q. 6
Halifax, 2 12 6

Copper Sulphate—
Naples. 37 t. 4 c. £733
Bordeaux, 183 19 2 3,228
Galatz, 31 10 1 571
Nantes, 12 16 1 237
Leghorn, 56 4
Marseilles, 24 13 3 352
Vigo. 2 1 49
Venice, 59 10 3 1,079
Genoa, 214 19 7
M. Video. 4 17 97
Lisbon, 52 3 3 949
Bari, 42 16 2 817
Ancona, 19 14 2 408
Rouen, 9 17 191
Hong Kong, 1 25
Batoum. 99 18 2 1,992
Civita Vecchia, 4 17 3 79

Cream of Tartar—
Valparaiso, 2 c. £4

Disinfectants—
Bombay, 2 t. £52
Madras, 13 c. 2 q. 20
M. Video, 3 3 9

Guano—
Malaga, 19 t. 16 c. £129

Lead Acetate—
Canada, 7 c. £7

Magnesia—
M. Video, 7 cs.
Rio de Janeiro, 2
Ponce, 4

Magnesium Chloride—
Boston. 14 t. 18 c. £37

Manure—
Antwerp, 1 t. 19 c 1 q. £8
Marseilles, 18 50

Oxalic Acid—
Boston, 24 t. 3 c. £597

Paint—
Antwerp, 36 pks.
Bilbao, 65 dms.
B. Ayres, 5 cks.
Cabedello, 2 cs. 14
Calcutta, 75 dms.
C. Coast Castle, 40 kgs.
Cartagena, N.G., 2 cks.
Champerico, 2
Cienfuegos, 4
Concepcion, 3
Coquimbo, 45
Gibraltar, 40 6 dms.
Havana, 7 cks.
Iquitos, 20 1 1
Lagos, 80
Manaos, 12
Opobo, 10 dms.
Para. 8 cks.
Pt Natal, 380 110 pks.
St. John's, Nfd, 334 3 cks.
Salaverry, 23
Singapore, 141
Smyrna. 580
Valparaiso, 27
Vera Cruz, 400

Painters Colours—
Aracaibo, 200 kgs.
Bahia, 5 cs.
Barbadoes, 4 pks.
B. Ayres, 8 cks.
Calcutta, 4
Candia, 3 brls.
Cape Palma, 5 cs.
Cephalonia 8 brls.
Colombo, 10 cs.
Hamburg, 29 1 bg.
Hong Kong, 127
Lahore, 90 15
Lisbon. 6 brls.
Mollendo. 4 cks.
New York, 12 2 cs. 51
Para, { 2 10 / 32 brls. 25 tcs.
Ponce, 6
Rio de Janeiro, 15
Rotterdam, 4 cks.
St. John's, Nfd, 130 9
San Juan 109 8
Santa Catharina, 43 cs.
Tampico, 4 brls. 11
Tangiers, 8
Valparaiso, 38

Paraffin Wax—
Algoa Bay, 50 cks.
Brindisi, 10 bgs.
Para, 30 cs.
Patras, 52
Rio de Janeiro, 6

Phosphorus—
Osaka, 5 cs. £41

Potash—
Para. 4 c. 2 q. £50

Potashes—
M. Video, 6 c. £7

Potassium Bicarbonate—
Oporto, 1 t. 1 c. 2 q. £34

Potassium Carbonate—
New York, 11 t. 2 c. £201

Potassium Chlorate—
Hamburg, 5 t. £132
Hiogo, 35 1,142
Newfairwater, 5 150
Randers, 1 30
Stockholm, 16 542

Salammoniac—
Algoa Bay, 5 c. £7
Galatz, 1 t. 10 48
Genoa, 14 21
Trieste, 4 128

Salt—
Antwerp, 170 t.
Assinee, 500 sks.
Baltimore, 100
Bathurst, 192
Boston, 20
Caibarien, 49 6 c.
Calcutta, 3,495 2
C. C. Castle, 61 5
Cape Town, 147 6
Cardenas, 20
Cienfuegos, 25
Delagoa Bay, 50 brls.
E. London. 5
Galveston, 150
Havana, 234 18 c.
Houlton, 16
Kingston. Ja., 315 9
Matanzas, 100
N. Orleans, 100
New York, 185
Old Calabar, 171 10
Para, 131 5
Rosario, 300 cs.
St. John, N.B., 305 10 c.
Santiago, 50
Sekondi, 6 5
Stockholm, 16 7
Warri, 9 8
Wilborg, 725

Salt Cake—
Antwerp, 120 t. £155
Baltimore, 100 4 c. 178
Delagoa Bay, 10 5 25

Saltpetre—
E. London, 1 t. 1 c. £24
Havana, 1 10 32
Para, 4 88
Pernambuco, 11 8 2 q. 257
Townsville, 1 22

Sheep Dip—
B. Ayres, 4 t. 10 c. £180
Calcutta, 3 cks. 100 dms. 68
Odessa, 3 t. 8 c. 1 q. 109

Soap—
Accra, 361 bxs. 6 cs.
Alexandria, 50
Algoa Bay, 1,699
Antwerp, 22
Assinee. 200
Barbadoes, 500
Beira, 50
Benin, 200
Bombay, 250 4
Cairo, 40
Calcutta, 37
Canaria, 208
C. C. Castle, 75
Cape Town, 1,450 90 13 pks.
Christiania, 200 12 crts.
Constantinople, 40
Copenhagen, 200
Delagoa Bay, 65
Durban, 200
E. London, 855 32
Fremantle, 1,000
Genoa, 220
Gibraltar, 77
Grenada. 480
Half Jack, 108
Halifax, 500
Hamburg, 15 3
Hong Kong, 1,000 50 dms.
Johannesburg. 210
King William's Town, 5
Lagos, 553
Lahou, 50
Las Palmas, 80
Livingston, 25
Madras, 10 4
Manaos, 520
Matanzas, 100
M. Video, 44
Montreal, 1,621 2 cks.
Newcastle, 2 tnks.
Ottawa, 433
Para, 600
Philadelphia, 1 ck.
Pt. Natal, 116 10 bdls.
Pram Pram, 50
Rotterdam. 100 162 dms.
St. John's, N'fd 1,480 23
Salt Pond, 50
Shanghai, 3,250
Sherbro, 200
Sierra Leone, 574 3
Penang, 400
Principulca, 90
Rangoon, 600 2
Surinham, 445
Trinidad, 2
Valparaiso, 30 kgs.
Warri, 100 bxs.
Yokohama, 2

Soda—
Bombay, 11 cks. 5 dms.

Soda Ash—
Barcelona, 50 bgs. 60 cks.
Barranquilla, 150 cs.
Bombay, 20
Boston, 52 tcs. 71
Calcutta, { 300 kgs. 383 / 100 bgs.
Callao, 100
Christiania, 420
Copenhagen, 100
Fairwater, 850
Genoa, 480
Ghent, 370
Hamburg, 24
Hiogo, 407
Hobart, 32
Kingsey, 100
Kobe, 462
M. Video, 50
Naples, 33
New York, 320 33
Odense, 50
Porto Alegre, 100 brls.
Rio G. do Sul, 334
Santos, 20
Sao Paulo, 20
Philadelphia, 1,800 79 tcs.
Skien, 52
Trieste, 200
Toronto, 450
Venice, 200
Vera Cruz, 25

Soda Crystals—
B. Ayres, 67 cks.
Cadiz, 50
Calcutta, 35 kgs. 25 brls.
Delagoa Bay, 30
Halifax, 25 180 pks.
Iquique. 100
New York, 125 280 cks.
St. John, N.B., 25
St. John's, N'fd. 40
Philadelphia, 140
Piræus, 25

Sodium Acetate—
Barcelona. 16 cks.

Sodium Arseniate—
Antwerp, 3 cks.
Lisbon, 2

Sodium Bicarbonate—
Antwerp, 145 kgs. 2 cks.
Barbadoes, 4
Beira, 45
Bombay, 20
Brisbane, 180 bgs.
B. Ayres, 50 kgs. 20
Calcutta, 250 5
Cape Town, 20
Colombo, 15 8 pks.
Dunedin, 30
E. London, 53
Fairwater, 300
Genoa, 195 8 cks.
Halifax, 100 25
Hamburg, 90
Hobart, 40
Kobe, 600
Malaga, 20 dms.
Marseilles, 280 35 pks.
Melbourne, 100
Mexico City, 18
Odessa, 200 150 dms.
Otago, 40 10 cks.
Para. 80
St. John, N.B., 50 dms.
St. John's, N'fd., 15
Tampico, 80 4 brls.
Toronto, 3 cs.
Vera Cruz, 20

Sodium Carbonate—
Boston, 56 brls.
Brisbane, 50 kgs.

Sodium Chlorate—
Lisbon, 1 ck.
New York, 140 kgs.
Philadelphia, 100
Stettin, 100 20

Sodium Silicate—
Bombay, 10 brls.

Sodium Sulphate
St. John, N.B., 10 brls.

Sodium Tartrate—
Havana, 4 cks.

Sulphate of Lime—
Rio de Janeiro, 19 t. 3 c. £47

Sulphur—
Antwerp, 10 t. £42
Boston, 100 4 c. 427
Salavery, 13 5
St. John's, 7 2

Sulphuric Acid—
Callao, 19 c. 3 q. £9
Rio de Janeiro, 1 t. 19 14

Superphosphates—
Antwerp, 7 t. 17 c. 2 q. £14
Barcelona, 34 8 267
Stettin, 1,100 2,541
Valencia, 410 5 1 822

Varnish—
B. Ayres, 8 cs.
Lahore, 5
Malaga. 6 cks.
Montreal, 9 pks.
Smyrna. 2
Valparaiso. 15

White Lead—
Bahia, 50 kgs.
Cape Town, 120 dms.
Pt. Said, 4 cks.
St. John, N.B., 27

MANCHESTER.

Week ending April 5th.

Borax—
Alexandria, 20 kgs.

Caustic Soda—
Beyrout, 50 dms.
Jaffa, 30

Chemicals (*otherwise undescribed*)
Alexandretta. 21 brls.
Ludwigschafen, 25 cks.

Coal Products—
Aniline Colours
Germany, 16 kgs.
Aniline Oil
France, 9 dms.
Germany, 1 brl.
Aniline Salt
Germany. 1 ck.
Benzol
Treport, 1 dm.
Carbolic Acid
Germany, 25 cks.
Holland, 50
Treport, 2 114 dms.
Naphtha
Treport, 10 brls.
Pitch
Belgium, 233 t. 17 c.
Marseilles, 847 8
Pyridine
Germany, 12 cks.
Copperas—
Alexandria, 34 brls.
Dyestuffs—
Tan Extract
France, 5 cks.
Litharge—
France, 2 cks.
Paint—
Bombay, 17 kgs.
Jaffa, 1 ck. 5 cs.
Potassium Bichromate—
Alexandria, 8 cks.
Salammoniac—
Alexandria, 15 cks.
Salt—
St. John, N.B., 550 t.
Soap—
Germany, 2 pns.
Holland. 25 cs.
Soda Ash—
Sweden, 6 cks.
Sodium Bicarbonate—
Beyrout, 25 kgs.
Tunis, 20
Starch—
France, 6 bgs.
Tallow—
Holland, 5 cks.
Zinc Ashes—
Germany, 121 bgs.
Zinc Chloride—
Bombay, 3 cks. 3 cs.

HULL.

Week ending April 1st.

Ammonium Sulphate—
Ghent, 200 bgs.
Marseilles, 200
Basic Slag—
Morlaix, 1,250 bgs.
Bleaching Powder—
New York, 20 cks.
Caustic Soda—
Genoa, 129 dms.
Hamburg, 1 ck.
New York, 200
Chemicals (*otherwise undescribed*)
Antwerp, 5 cs.
Copenhagen, 20 cks. 17
Christiania, 2,441 slbs.
Drontheim, 200 pks.
Genoa, 59 18 177
Gothenburg, 8 8
Hamburg, 10
Konigsberg, 6 25
New York, 430
Naples, 24
Rotterdam, 3 69
Stavanger, 110
Stettin, 9 79
Coal Products—
Pitch
Antwerp, 80 t.
Tar
Amsterdam, 6 cks.
Bremen, 5
Christiania, 11 3 dms.
Copenhagen, 8
Danzig, 5
Gothenburg, 3
Rotterdam, 13
Stavanger, 4
Cottonseed Oil—
Antwerp, 15 t. 7 c.
Bremen, 10 6
Christiania, 17
Copenhagen, 29 5
Dunkirk, 11 19
Hamburg, 47 4
Harlingen, 1 14
Konigsberg, 5 1
Rotterdam, 69 10
Rouen, 3 1
Stettin, 9 18
Stockholm, 37 10
Dyestuffs (*otherwise undescribed*)
Gothenburg, 2 cks.
Stockholm, 1 cs.
Guano—
Dunkirk, 120 t.
Linseed Oil—
Amsterdam, 10 t.
Christiania, 7 3 c.
Christiansand, 2 14
Copenhagen, 1 15
Drontheim, 8 5
Hamburg, 18
Rotterdam, 17
Stavanger, 18
Paint—
Ghent, 1 ck.
Stockholm, 1
Painters' Colours—
Amsterdam, 4 cks.
Antwerp, 38 1 cs. 8 dms. 1 pk.
Christiania, 2 3 1
Copenhagen, 13 5 4 dms.
Dunkirk, 2
Genoa, 20
Ghent, 39
Gothenburg, 3 pks.
Hamburg, 59 10
Harlingen, 200 bgs.
Konigsberg, 35 cks. 50
Leghorn, 29
New York, 136
Rotterdam, 8 20 dms.
Rouen, 22
Stettin, 22 42 pks.
Stockholm, 14 2
Slag—
Helsingborg, 370 t.
Soap—
Amsterdam, 157 cs.
Christiania, 3
Superphosphates—
Drontheim, 60 t.
Tallow—
Amsterdam, 27 cks.
Genoa, 134
Varnish—
Antwerp, 1 ck. 4 cs.
Bremen, 2
Danzig, 1
Hamburg, 6
Konigsberg, 15
Marseilles, 4
Harlingen, 3
Waste Salt—
Amsterdam, 40 brls.

GLASGOW.

Week ending April 6th.

Ammonium Sulphate—
Barcelona, 24 t. 19 c. 3 q
Christiania, 6 16
Valencia, 365 10
Bleaching Powder—
Calcutta, £305
Borax—
E. London, £51 10s.
Coal Products—
Benzol
Rotterdam, £150
Creosote Oil
Christiania, £10 10s.
Danzig, 120
Pitch
Bombay, £146 5s.
Danzig, 153 t. 10 c.
Hamburg, 100 8
Malmo, 276
Rochefort, 998 2 1 q.
Tar
Danzig, £175
Dyestuffs—
Myrabolams
Spain, £55 15s.
Shumac
Spain, £107 17s.
Gutta Percha—
Rotterdam, £19
Iodine—
Rotterdam, £1,260
Lead Nitrate—
Canada, £53 15s.
Logwood Extract—
Bergen, £28
Muriatic Acid—
Bombay, £52 10s.
Nitric Acid—
Bombay, £512 10s.
Painters' Colours—
Bombay, £38
Calcutta, 282
Cape Town, 84
Christiania, 49
Rio de Janeiro, 22 10s.
Rotterdam, 39
Smyrna, 33
Paraffin Wax—
Barcelona, £914
Cape Town, 98
Paris, 20
Valencia, 30
Potassium Bicarbonate—
Amsterdam, £281
Barcelona, 58
Montreal, 131
Paris, 148
Rouen, 138
Smyrna, 58
Toronto, 111
Rosin—
Egypt, £22 10s.
Soap—
Cape Colony, 2 t. 10 c.
E. London, 7 5
Queenstown, 1 5
Rotterdam. 3 2 q.
Sodium Bicarbonate—
Barcelona, 3 t. 1 c. 2 q.
Montreal, 7 18
Paris, 4 1 14 lbs.
Potassium Bichromate—
Rouen, 32 t. 19 c. 1 q.
Starch—
Alexandria, £127
Rio de Janeiro, 270
Rotterdam, 13
Smyrna, 45
Sulphuric Acid—
Bombay, £810
Calcutta, 45
Tallow—
Rotterdam, 17 t. 10 c. 2 q.
Tannin Extract—
Barcelona, £279

TYNE.

Week ending April 1st.

Alkali—
Amsterdam, 24 t. 4 c.
Hamburg, 10 17 3 q.
Rotterdam, 2 2 1
Alum Waste—
Copenhagen, 20 t. 2 c. 3 q.
Horsens, 20 11 1
Aluminium Sulphate—
Rostock, 6 t.
Antimony—
Copenhagen, 10 c. 3 q.
Hamburg, 8 t.
Rotterdam, 5
Arsenic—
Rotterdam, 1 t. 1 c. 2 q.
Barium Binoxide—
Genoa, 8 t. 18 c. 1 q.
Rouen, 17 3
Barium Carbonate—
Hamburg, 25 t.
Rouen, 32 14 c.
Bleaching Powder—
Aarhuus, 2 t. 17 c.
Amsterdam, 37 13 3 q.
Antwerp, 8 3 1
Bergen, 10 8
Christiania, 17 2 1
Copenhagen, 11 4
Odense, 15 3 3
Rotterdam, 11 4 2
Caustic Soda—
Antwerp, 12 t. 5 c. 2 q.
Bergen, 1 9
Christiania. 4 7
Copenhagen, 1 10 2
Genoa, 10 3
Rotterdam. 43 11
Coal Products—
Carbolic Acid
Rotterdam, 5 t. 14 c.
Colours—
Hamburg, 1 ck.
Magnesia—
Antwerp, 8 c.
Genoa, 1 t. 11
Hamburg, 8
Rotterdam, 10 1 q.
Paint—
Antwerp, 6 t. 10 c.
Copenhagen, 1 6
Hamburg, 1 3
Stavanger, 1
Red Lead—
Amsterdam, 5 t. 7 c.
Bergen, 3 4 3 q.
Christiania, 1 2 2
Copenhagen, 9 17 1
Genoa, 7 3
Hamburg, 11 12 2
Rouen, 4 14 2
Soda—
Amsterdam, 40 t.
Bergen, 3 c.
Christiania, 8 14 1 q.
Genoa, 11 10 3
Rotterdam, 10 6 1
Soda Ash—
Copenhagen, 13 c. 1 q.
Sodium Hyposulphite—
Antwerp, 1 t. 19 c. 2 q.
Superphosphates—
Christiania, 8 t. 16 c. 3 q.
Genoa, 100 1 2
Helsingborg, 975 3 2
Rostock, 865 9 1
White Lead—
Copenhagen, 1 t. 1 c. 1 q.

GOOLE.

Week ending March 29th.

Alkali—
Boulogne, 14 cks.
Benzol—
Boulogne, 30 cks.
Caoutchouc—
Boulogne, 3 cks.
Chemicals (*otherwise undescribed*)
Amsterdam, 20 cks.
Antwerp, 2 dms.
Hamburg. 19 7 crbys.
Coal Products (*otherwise undes.*)—
Amsterdam, 123 cks.
Boulogne, 11 3 cs. 2 dms. 13 tins
Hamburg, 3 1
Rotterdam, 7 1
Coal Products—
Pitch
Antwerp, 759 t.
Dyestuffs (*otherwise undescribed*)
Ghent, 7 cks. 30 bgs.
Hamburg, 60
Rotterdam, 44 cks.
Glue—
Boulogne, 5 bs.
Manure—
Dunkirk, 202 bgs.
Painters' Colours—
Antwerp, 1 ck.
Boulogne, 1 5 cs.
Calais, 1
Ghent, 1 2 dms.
Hamburg, 2

GRIMSBY.

Week ending April 1st.

Alkali—
Dieppe, 1 ck.
Caoutchouc—
Gothenburg, 1 ck. 1 bl.
Chemicals (*otherwise undescribed*)
Dieppe, 1 ck. 12 cs.
Hamburg, 30 dms.
Coal Products (*otherwise undes.*)—
Dieppe, 3 kgs. 200 cks. 1 cs.
Coal Products—
Pitch
Antwerp, 47 t. 10 c.
Colours—
Esbjerg, 8 dms.
Manure—
Esbjerg, 6,051 bgs.
Hamburg, 672
Painters' Colours—
Antwerp, 1 kg. 6 cks. 5 cs. 2 pks.
Rotterdam, 8 kgs. 3 cks. 5

PRICES CURRENT.

WEDNESDAY, April 12, 1899.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9 & 8/3		
,, Glacial .. .. ,,		35/-	
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	9
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	0	11½
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	0
Arsenic, white powdered .. .. nett per ton	18	10	0
Alum, loose lump .. .. ,,	4	5	0
Alumina Sulphate (pure) .. .. ,,	3	15	0
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2¾
,, = 24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	20	0	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/- & 33/-		
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	10	15	0
,, ,, (grey) Hull .. .. ,,	10	15	0
Aniline Oil (pure) .. .. per lb.	0	0	4½
Aniline Salt ,, ... ,,	0	0	4
Antimony .. .. per ton	39	0	0
,, (tartar emetic) .. .. per lb.	0	0	6¾
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6 to 65/-		
Bleaching Powder, 35 % .. .. nett ,,	4	5	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	5	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6¼
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. ,,	15/- to 25/-		
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30% A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	7½
,, 50/90 ,, ... ,,	0	0	8
Carbolic Acid (crude 60°) .. .. ,,	0	1	11½
,, (crystallised 40°) .. .. .. per lb.	0	0	6¾
,, (liquid 95/97%) .. .. .. per gallon	0	1	0
Creosote (ordinary) .. .. ,,	0	0	3½
,, (filtered for Lucigen light) .. .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	3	0	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	3	0
Solvent Naphtha, 90% at 160° .. .. per gallon	0	1	1
Copper .. .. per ton	72	15	0
,, Sulphate .. .. ,,	24	15	0
,, Oxide (copper scales) .. .. ,,	56	0	0
Glycerine (crude) 80% .. .. ,,	24	10	0
,, (distilled S.G. 1250°) .. .. ,,	48	10	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	2	6
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet)	15	15	0
,, Litharge Flake (ex ship) .. .. ,,	16	0	0
,, Acetate (white ,,) .. .. ,,	26	0	0
,, ,, (brown ,,) .. .. ,,	18	10	0
,, Carbonate (white lead) pure .. .. .. ,,	18	10	0
,, Nitrate .. .. ,,	22	10	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	0	0
,, ,, (grey) (ex ship) .. .. ,,	7	17	6
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton	9	10	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	15	10	0
,, Borate .. .. per cwt.	2	0	0
,, Ore, 70% .. .. per ton	3	10	0
Methylated Spirit, 61° O.P .. .. per gallon	0	2	0
Naphtha (Wood), Solvent .. .. ,,	0	3	0
,, ,, Miscible, 60° O.P. .. .. ,,	0	3	10
Oils:—			
Cotton-seed .. .. per ton	17	15	0
Linseed .. .. ,,	19	10	0
Stearine .. .. ,,	26	0	0
Phosphorus (Yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	10	0
,, Chlorate .. .. per lb.	0	0	3½
,, Cyanide, 98 % .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) 90 % .. .. per ton	22	0	0
,, ,, ,, 75/80 % .. .. ,,	17	15	0
,, Potash Hydrate Liquid 50 % .. .. ,,	11	0	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	2	12	6
,, Prussiate Yellow .. .. per lb.	0	0	7¾
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	0
,, Muriate, 80 % ,, ... ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3 7/16
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % .. nett per ton f.o.r. wks.	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,,	4	5	0
,, ,, (Carb. Soda-ash) 48 % .. ,, ,,	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,,	4	0	0
,, ,, (Soda Crystals) .. .. .. ,, ,,	2	10	0
,, Acetate (ex-ship) .. .. ,,	12	15	0
,, Arseniate, 45 % .. .. ,,	13	10	0
,, Chlorate .. .. per lb.	0	0	3¾
,, Borate (Borax) .. .. nett per ton	16	0	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton 10 ton lots	7	12	6
,, ,, (74 % Caustic Soda) ,, ,, ,,	7	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,,	7	0	0
,, ,, (60 % Caustic Soda) .. ,, ,,	6	0	0
,, ,, (pure liquor 90° Tw.) .. ,, ,,	3	10	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate (cwt. kegs) .. .. ,,	6	15	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25 % .. .. ,,	15	10	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	8	6
,, Nitrite, 98 % .. .. per ton	26	0	0
,, Phosphate .. .. ,,	10	7	6
,, Prussiate .. .. per lb.	0	0	5 7/8
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	10	0
,, Stannate, 40 % .. .. per cwt.	3	10	0
,, Sulphate (Salt-cake) .. .. per ton	1	10	0
,, ,, (Glauber's Salts) .. .. .. ,,	1	15	0
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	4	15	0
Strontium Hydrate, 100 % .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. .. per lb.	0	0	5¾
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton	7	0	0
,, (Roll Brimstone) .. .. ,,	6	0	0
,, Brimstone: Best quality .. .. ,,	4	12	6
Superphosphate of Lime (26 %) .. .. ,,	2	10	0
Tallow .. .. ,,	24	0	0
Tin Crystals .. .. per lb.	0	0	7½
,, English Ingots .. .. per ton	115	10	0
Zinc (Spelter) .. .. ,,	27	17	6
,, Chloride (solution, 100° Tw.) .. .. .. ,,	7	10	0
,, Sulphate, Crystal .. .. ,,	7	15	0

THE

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AND

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CURRENT TOPICS.

THE BRITISH ANALYTICAL CONTROL CONTROLLED.

ABOUT two months ago we had occasion to refer to the self-appointed authority which then constituted itself as the "British Analytical Control." We then pointed out its aims and objects, which, if sufficiently high-sounding on paper, did not prevent us from commending the whole affair to the attention of the Censors of the Institute of Chemistry.

It is with pleasure that we now find a direct reference to this matter in the address of the President of the Institute. Not that we flatter ourselves for one moment by thinking we may have, in any way, induced this reference, through having called attention to the matter in our columns, but because the Council have seen fit to rigidly adhere to the standard they adopted some years ago, and have publicly declared that the gander shall be served with the same sauce as the goose. All the gentlemen constituting this "controlling body" are Fellows of the Institute, and however honest their intentions may be when looked at personally, the fact remains that collectively the result of their proposals is a breach of the principles of professional etiquette, propounded by the Foundation, whose dignity they have pledged themselves to maintain.

The remarks of the President were pertinent, while the fact of their having been coupled with the other reprehensible practices which he denounced in his address, should prove as potent a deterrent as the actual protest made direct by the Council through its officers.

PATENT LAW REFORM.

There are always two sides to a question, and though many of the reforms which are needed in our Patent Laws are so apparent that they hardly leave room for two opinions, still it is always wise to look at both sides, and even more so to investigate the remedies that it is proposed to apply in order to cure the evils.

For instance, much has been said about the necessity of the Patent Office making a search, as is done in the United States and Germany. Several tempting arguments have been adduced in favour of this change being urged upon the Government, and a resolution to this effect was carried at the last meeting of the Association of the Chambers of Commerce of the United Kingdom.

While agreeing that the Patent Office should make something like an examination for novelty—even if it be confined to merely endorsing a specification with the numbers of the patents which the expert searchers think anticipate the specification under consideration, without prejudicing its acceptance—still the remarks of those who opposed the resolution are worthy of consideration, for some of the remarks are to the point, one gentleman in particular making an interesting comparison between the conditions existing in the United States and Germany, where a rigid

examination is made, and England and France, where there is no examination. In the two former countries patents are refused on the slightest possible pretext. In England patents are granted as a matter of course, and the inventor takes the risk. The result is that when litigation takes place in the United States and Germany, it is very seldom a patent is declared invalid; but this is not the case in this country and France. Taking the year 1895, for England there were twenty-six patents before the court and eleven declared invalid; in France the validity of fifty patents was tested and twelve declared invalid, or thirty per cent.; in Germany 102 cases, forty-three wholly or partially bad; in the United States 198 actions, and fifty-four declared wholly or partially bad. Therefore, there were thirty per cent. in the non-examining countries, and thirty-three per cent. in the countries where a rigid search is made. The explanation of these figures may very likely be made plain by the fact that the examination was very often a snare to people. Out of 12,000 patents in England in one year, there were only twenty-six on which litigation took place at all. Out of 5,000 taken out in one year in Germany, there were 104 contested, of which forty-three were declared bad. In Germany the cost of actions is lower, and that may account partly for the number of patents contested; but this would point to the expensiveness of British Law affording protection to inventors against being harried by wanton actions.

ARSENIC WORKERS.

A QUESTION of some considerable importance has arisen in the region of Tavistock, Devonshire, where, situated on the western borders of Dartmoor, there are several works for the manufacture of arsenic. It would appear that for some time the Tavistock Board of Guardians have had to give relief to families where the husband and father is an employé of one or other of the arsenic works, and has been overtaken by illness. It has also been noticed by the same public authority that men from the arsenic works were coming on the rates on account of inability to continue employment. In consequence of the representations made that both the sickness and the premature old age were induced by the character of the employment, steps were taken with a view to inquiry into the matter. The investigation has not proved an easy one, nor up to the present is it at all satisfactory. A good deal of friction has arisen between the Board of Guardians and the proprietors of the chemical works, the latter regarding the action of the former as a harassing, if not a wholly unnecessary, proceeding. It has been suggested that much of the danger to workmen attendant upon their duties would be obviated by the wearing of a mask. It seems that the Board of Guardians sent their medical officer to visit and report upon the works, but (so it is stated) that official was denied admission, presumably on the ground that the Government inspector for the district was the only recognised authority for purposes of supervision. The controversy between the parties has been waging for some weeks, and in its latest aspect it assumes the form of a suggested conference between a committee of the Guardians and the managers of the works, so that a settlement seems probable. Inquiries on the spot would appear to indicate that the proprietors of these works are as solicitous as any employers can be for the health and comfort of their workmen, but they resent the attitude of the Board of Guardians as too hostile, and calculated to jeopardise the success of a perfectly legitimate industry. The upshot of the conference is awaited with eager curiosity by manufacturers of all kinds, and particularly those whose works are alleged to be dangerous to health.

Liquid Air as an Explosive.—The Technical Committee of the Austrian War Office have been making experiments in a quarry with liquid air as an explosive. The results are stated to be extraordinary.

Overcome by Producer Gas.—On Saturday, while a number of workmen at a refrigerating warehouse in Liverpool were engaged making producer gas, the gas escaped on to the platform on which they were working, three of them being quickly rendered unconscious. Fortunately assistance was at hand and the men were taken to the hospital.

IMPORTS AND EXPORTS FOR MARCH.

THE Board of Trade returns for the past month are fairly satisfactory. The *imports* of chemicals, including nitrate of soda, were less in value, but tallow and rosin were higher. The *exports* of salt and manures show an increase, and chemicals generally were higher in value with the exception of alkali.

IMPORTS OF FOREIGN AND COLONIAL PRODUCE.

Articles.		Quantities. 1898.	Quantities. 1899.
Margarine	Cwt.	88,708	81,869
Copper Ore and Regulus	Tons	12,789	16,413
Pyrites	,,	51,597	54,196
Tin	Cwt.	54,495	68,117
Alkali	,,	11,323	13,834
Brimstone	,,	37,330	42,000
Dyes, Coal Tar	£.	67,932	55,781
Saltpetre	Cwt.	20,574	21,858
Petroleum	Gall.	18,785,823	18,115,215
Turpentine	Cwt.	20,523	16,532
Guano	Tons.	3,782	1,068
Nitrate of Soda	,,	19,530	12,533
Paraffin Wax	Cwt.	79,601	87,500
Rosin	,,	11,051	196,694
Tallow and Stearine	,,	137,808	147,370
Tar	Barrels	1,879	5,229
Oil Seed Cake	Tons	39,674	49,166
Wood Pulp	,,	29,182	30,105
Borax	Cwt.	7,112	538

EXPORTS OF BRITISH AND IRISH MANUFACTURES.

Articles.		Quantities. 1898.	Quantities. 1899.
Alkali	Cwt.	345,873	302,227
Cement	Tons.	33,860	27,555
Coal and Coke	,,	3,079,982	3,462,405
Copper, all kinds	Cwt.	71,477	79,565
Iron and Steel	Tons.	285,000	276,431
Chemical Manures	,,	40,681	43,788
Oils, seed	,,	5,195	3,481
Salt	,,	38,325	43,371

Fire at a Tar Works.—A serious fire occurred at Lowe's Tar and Cement Works, Farnworth, on Thursday. Some varnish was being boiled, when the spirit being added caught fire, burning two men about the face and arms, and also setting fire to the buildings.

Society of Chemical Industry.—*London Section.*—An extra meeting of this section will be held at the Chemical Society's Rooms, Burlington House, Piccadilly, on Monday, April 24th, 1899, when the President, Mr. George Beilby, will give an address on the following subject: "The relations of the society to chemical engineering and to industrial research." It is anticipated that there will be a large attendance and a good discussion.

Society of Chemical Industry.—*Liverpool Section.*—The next meeting of this section will be held at the Chemical Laboratories, University College, on Wednesday, April 26th, 1899, at seven p.m. Business: (1) Miscellaneous communications; (2) lecture on "The Raschen process for the manufacture of cyanide," by Dr J. T. Conroy.

Manchester Sewage Estimates.—The estimates of the Rivers Committee of the Manchester Corporation show that the amount required in respect of the current year under the head of revenue account is £54,426. 9s. 1d. After deducting the excess of estimated over actual payments for the past year, £51,385. 13s. 4d. is left to be raised in the current year's rate. The amount estimated last year was £59,532. 14s. The payments for the past year include £2,539. 19s. 11d. for luncheons, deputations, and travelling expenses, £2,129. 6s. 8d. of which was expended by the old Rivers Committee. The cost of repairs to the sludge steamer, Joseph Thompson, for the past twelve months has been £1,982. 3s. 2d, and of this sum the Insurance Companies have paid £1,556. 0s. 1d. Under the head of receipts the Stretford Urban District Council have paid £3,300. for treatment of part of their sewage at Davyhulme. On capital account the estimates show a total proposed expenditure of £115,868. 8s., as against £148,720. estimated last year. This sum includes £75,000. set aside for the projected filter beds at Davyhulme. The Rivers Committee propose to spend £6,500. this year on lime, chemicals, &c., at Davyhulme, as against £5,500. in the year just closed.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

A New or Improved Composition for Laundry Purposes. J. H. Tynan. 7,044. April 4.

Improvements in Apparatus for Leaching Tan Bark. D. Young. 7,066. April 4.

Improved Substitute for India-rubber. W. Jones. 7,109. April 4.

Process for the Purification of Brine. G. Nicolaas. 7,107. April 4.

Igniting Compound for Use in the Manufacture of Matches. E. F. Trachsel. 7,114. April 4.

Improvements in the Method of Treating China Clay, Oxides, and other Substances suspended in Water which require Separation therefrom. E. M. T. Boddam. 7,125. April 5.

A New or Improved Liquid Soap. J. Mendess. 7,163. April 5.

Improvements in the Production of Fluoroform. T. Sugden. 7,244. April 6.

Manufacture of Matches L. Cobbaert. 7,276. April 6.

Apparatus for the Manufacture of White Lead by the old Dutch Method. T. F. Wilkins. 7,281. April 6.

Consuming Smoke. O. A. D. Lithander. 7,296. April 7.

Explosives. W. Roos. 7,352. April 7.

Improved Process and Apparatus for Condensing Arsenious Acid, Metallic Fumes, and the like. W. P. Thompson. 7,357. April 7.

Process for Purifying or Ageing Spirits of Wine and other Alcoholic Liquids. H. von Dorp. 7,414. April 8.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in Purifying Hydrocarbon Oils and Rendering them Non-explosive. J. South, 10, Roman-street, Sett Lees, near Oldham. Eng. Pat. 23,324. November 15, 1898.

A mixture of bleaching powder, pearl ash, caustic soda, and alum is added to the petroleum to be treated, and the whole blown with air for three hours. After settling, the mixture is filtered through sawdust, which has been charred and impregnated with lead acetate. A mixture of chlorate of potash and ground carbon is then added, and the oil blown once more. The oil is ready for use after being blown for about fifteen minutes. There is one figure.

Improvements in Electrodes and in the Method Employed for Producing them. K. Krebs, Mariendorf, near Berlin. Eng. Pat. 8,319. April 7, 1898.

Electrodes, presumably for secondary batteries, are formed by casting lead into frames or carriers made of baked earths or certain metals. There are 16 figures showing various patterns which may be used. Lead may also be cast on iron cores, which are afterwards eaten out with dilute sulphuric acid, and the electrode finisned by filling in with an active substance.

Improvements in the Manufacture of White Lead Paint. T. C. Sanderson, Brooklyn, Humber-road, Westcombe Park, Surrey. Eng. Pat. 11,447. May 19, 1898.

The wet white-lead pulp as obtained by precipitation from a basic acetate solution is partially dried by draining, then mixed with oil, and whirled in a centrifugal machine. By the difference in gravity between the white lead in oil and the water, the latter is entirely eliminated. The oil and white lead can then be finished by grinding. The great advantage claimed is that the dangers of the harmful dust encountered in handling the dry white lead, before mixing with oil, are entirely obviated.

Improvements in the Manufacture of Elements or Plates for Secondary Batteries or Electric Accumulators. F. King, 4, Gt. Winchester-street, London. Eng. Pat. 11,858. May 25, 1898.

When the plates have been filled with the active material, they are placed between felt or asbestos sheets, and pressed between press plates, perforated to allow the passage of needles. These are forced through the plastic, active material, leaving small holes, without removing any of the material itself, since the passage of the needles only compresses the plastic mass leaving the desired number of perforations. There is one figure.

Improvements in or Relating to the Treatment of Oil, and the Production of Consistent Grease Products therefrom. F. Biedermann, 3, Pfeiffergasse, Vienna XIV. /3. Eng. Pat. 1,029. January 10, 1899.

The object is to prepare a suitable grease for lubricating etc., from all kinds of vegetable and animal oils. To this end the blue oil obtained as a residue in the distillation of petroleum is mixed with wool fat, and the mixture saponified with caustic soda or potash. The proportions vary according to the nature of the oils used.

A Preparation or Composition for Cleansing or Scouring Wool, Cotton, Linen, Silk, and the like, or Goods made therefrom. T. Pate, T. H. Thompson, G. Duxbury, and J. H. Whittaker, all of the Thoroclean Soap Works Co., Smithy Gate, Padiham, Lancs. Eng. Pat. 9,883. April 29, 1898.

To prepare a saponaceous compound which will clean silk, etc., without damaging the material or affecting the dye, 26 parts of oleic, palmitic, or other fatty acids are mixed with 6 parts of benzine, 10 of liquor ammoniæ (0 880 sp. gr.), and 70 parts of water. The whole is stirred and intimately mixed until a thick pasty mass is formed. Soda is entirely absent.

Improvements in Soap. S. V. Kay (of Kay Bros., Ltd.), St. Petersgate Mill, Stockport. Eng. Pat. 4,773. February 26, 1898.

Pulverised rubber is incorporated with soap. In preference to rubber, however, the patentee uses the rubber substitute obtained by the action of sulphur chloride on colza oil. After being finely ground, the rubber or substitute is mixed with the soap in the proportion of one part to 5 of soap.

SOCIETY OF CHEMICAL INDUSTRY.

SCOTTISH SECTION.

ON the evening of Monday, April 17th, there was held the annual business meeting of this section, in the Windsor Hotel, 250, St. Vincent Street, Glasgow. Professor G. G. Henderson presided. The annual statement of the honorary secretary, Mr. Gray, bore that the membership of the section, on March 31 of the present year, stood at 287, as compared with 293 on March 31st, 1898. During the year 19 new names were added to the roll; but over the same period there were 25 deletions, due severally to death, resignation, and removal to other districts. The meetings held during the session numbered 5, with an average attendance of 50. Papers read ran to a total of 13, and there were two discussions of importance. The space allotted to these papers and discussions in the journal of the society amounted to 77 columns. The re-arrangement of the roll of office-bearers was effected at the meeting, Professor G. G. Henderson and Mr. Thomas Gray being continued severally as chairman and honorary secretary and treasurer, with Dr. A. P. Aitken as vice-chairman, and Messrs. W. C. Anderson, Edwin M. Bailey, and Alan D. Ker as new members of committee. Following on the business meeting, members and friends dined together, with Mr. George T. Beilby (president of the society) as guest. Professor G. G. Henderson occupied the chair, and amongst others, to the number of about 50, there were present Sir John Neil Cuthbertson, Professor Barr, and Mr. W. R. Copland, Glasgow; Mr. R. Caird, Greenock; Mr. Carter Bell, Manchester; and Mr. Gordon Salamon, London. In announcing the toast of the evening, "The President of the Society of Chemical Industry," the Chairman called to mind that the society was now a powerful federation of more than 3,000 members, with eight sections, one in Scotland, one in the United States, and the others in England, so that the position of President, while one of honour and distinction, was also an office of great responsibility. The roll of past presidents was a distinguished one, beyond all question, but probably never had a president more fully justified his selection than Mr. Beilby. Mr. Beilby, in replying, referred to the new schemes and suggestions tending to greater prosperity and usefulness on the part of the society. If they had made a mistake in the past it was perhaps in this respect, that they had not fully utilised the society as a bond between pure and applied science. Recently, conferences had been attempted upon this subject, and he rejoiced to think they would see the universities on the one hand, and the manufacturers on the other, communing more closely, and thereby bringing about a new era of prosperity for the industry, and a new stimulus for the universities themselves. Glasgow University had one Professor of Chemistry; but the Columbia University of New York City had no less than 18 professors and lecturers in chemistry alone. Thereafter, Dr. Clark proposed the "Other Sections of the Society," to which toast Mr. J. Carter Bell and Mr. Gordon Salamon responded. Other toasts followed, and this comparatively new order of social function proved a great success in immediate sense, while undoubtedly tending to the expansion of the society in the future.

THE SWISS CHEMICAL TRAD E IN 1898

[SPECIALLY CONTRIBUTED.]

WE are very apt to lose sight of Switzerland as an element in modern industrial competition. All the trade done between it and this country must necessarily pass through some other having a seaboard, and the Board of Trade has not yet been able to devise any means of disintegrating the figures so as to publish them separately. Thus they appear in our returns as trade done with France or Germany, Holland or Belgium, as the case may be. But a country which has a foreign commerce of over £70,000,000 must not be overlooked. In its main features it very much resembles that of the United Kingdom, only of course on a much smaller scale actually, though not relatively. It is an industrial rather than an agricultural country; its principal imports are food and drink, increased to a considerable extent by the wants of the great tourist population which crowd its hotels and *pensions* during several months of each year, while its exports are of manufactured articles, principally textiles, but increased largely by the special attention devoted to horology. The former at any rate make heavy demands upon all kinds of chemical products, especially as they are mostly highly finished and expensive goods, and not merely the products of the spindle and the loom. It is the extent and nature of this trade in chemicals we have now to deal with.

It is divided in the official returns into three classes—drugs and articles for pharmaceutical use, chemical products for industrial purposes, and dyes and colours—while there is also a fourth dealing with manures and waste products, to which we will refer later. The respective imports and exports for 1898 were as follows:—

	Imports.		Exports.
Drugs	£170,000	.....	£160,000
Chemicals ...	£930,000	.....	£195,000
Dyes	£315,000	.....	£700,000
	£1,415,000		£1,055,000

There is very little classification attempted in the drugs. The largest item of import is unenumerated sundries, the value of which was £33,500. Next is mineral water for £28,000. Pharmaceutical articles—perfumeries, cosmetics, &c.— go to make up the remainder. Switzerland is one of those fortunate countries where the professions of doctor and chemist and druggist are at a discount. Of the exports the principal item is alkaloids for £75,000., with the rest divided among much the same classes as the imports, though not necessarily the same articles.

The second division proves pretty conclusively that Switzerland does not devote very much attention to chemical manufacturing, nor is there any single item which can be regarded as a Swiss speciality. The largest among the exports is for yellow prussiate, chlorate, and red chromate of potassium, which together amount to £27,500. Gelatine and isinglass account for £22,000., liquid coal tar £11,500., lime £8,500., raw tartar £6,500., and numerous other small amounts hardly worth detailing. On the other hand the import runs to a substantial figure. The Swiss prepare most of their own artificial dyes, and it is not surprising therefore to find that aniline, from which they are principally derived, figure for £90,000. Benzine, naphtha, paraffin, vasseline, and similar preparations are classed together for £57,500. Arsenious acid, borax and unenumerated salts of soda constitute another item for £64,000. Gum is included for £60,000. Of the products of alkali works, caustic soda figures for 2,860 tons, valued at £27,000, and caustic potash 300 tons, £6,000. Of calcined soda the quantity was 8,070 tons, valued at £35,000., and of soda crystals 1,115 tons, worth £2,600. Among acids hydrochloric heads the list with 6,670 tons, valued at £16,000.; sulphuric 5,260 tons, £17,000; nitric 265 tons, £400.; citric and tartaric together 142 tons, £16,000.; and carbonic 33 tons, worth £650. Boric, phosphoric, and other unenumerated acids represented in value £26,000. Sulphuric ether was worth £5,000. Of glycerine the import was 252,000 kilos. valued at £11,000. The sundries are very numerous, and include salammoniac and spirit of salammoniac 515 tons, valued at £6,000.; refined saltpetre 500 tons, £10,000.; stearine 840 tons, £25,000.; turpentine 1,060 tons, also £25,000; lime 845 tons, £26,000.

There are, in short, few products known to modern chemists for which Switzerland does not discover some use, and no better proof of the general activity of the industry of the country can be afforded than the increasing quantities absorbed. In so many articles, with so wide a range of price, the comparison of weights between one year and another may be very misleading, but when accompanied by corresponding increase in value, the deduction is obvious. Thus the total gain in weight in 1898 over 1897 in this division was 7,050 tons, that is, from 60,600 to 67,650 tons, and in value £120,000., or from £810,000. to £930,000., while there was likewise some increase in the exports. It is to be feared, however, that our English manufacturers derive little benefit. To begin with they are handicapped by distance, and *with* Germany such a close neighbour, that country's advantages, ordinarily great, became paramount. There is one thing, however, the ramifications of the chemical industry are so numerous that there is room for each country to cultivate its specialities, and despite German competition we still have many such for which so enterprising a country as Switzerland should prove a favourable field.

In the third division it will be noticed the figures of the other two are reversed. The Swiss, in fact, are as expert in the preparation of aniline dyes as the German, of whom they are keen competitors. Not only do they make most of what they require for themselves—the total value of what was imported was under £75,000.—but they ship largely to other countries, and the exports amounted to 3,175 tons, valued at £675,000. This it will be noticed accounts for nearly the whole sum apportioned to this section. The import was much more varied, and included indigo, worth £25,000; artificial alizarine, £20,000.; varnishes and lacquers, £34,000; wood extracts and other dyes and colours, both raw and prepared, for varying amounts. Here, too, the year's turnover was in excess of the previous one, the imports having increased to £8,000., and exports by nearly £11,000.

There remains for notice the division pertaining to manures and waste products. The imports amounted to 120,000 tons, valued at £480,000., but of this 27,430 tons was bran, oilcake, and other forage for animals, worth £145,000., and 7,520 tons rags and similar materials, valued at £65,000 The manures proper were, with the exception of some £30,000., artificial, and consisted of nitrate of soda and waste sulphuric acid, 40,350 tons in all, valued at £115,000., and of chemically prepared manures, 23,150 tons, £95,000. The total exports were 34,675 tons, valued at £125,000., but consisted of little else than forage and rags. For agricultural purposes a great deal of natural manure is produced at home, as cattle raising is the mainstay of the industry. Guyere cheese and condensed milk are the only two agricultural products for which markets are sought abroad, and the export of these is considerable, otherwise practically everything is retained for home consumption. But in the cultivation of his fruitful valleys the Swiss peasant is as diligent, and shows as much intelligence in the proper use of what is necessary, as the manufacturer in his mill or weaving shed; and the net result is a prosperous and contented people, in the full enjoyment of real democratic government.

THE UNITED STATES CHEMICAL TRADE.

[SPECIALLY CONTRIBUTED.]

ONE of the most retrograde features of the Dingley Tariff was the inclusion for the first time in the dutiable list of a number of chemical products, chlorate of potash, bleaching powder, and argols prominently among them. Even manufactured chemicals are now so much in the nature of raw materials for use in other industries, that few governments, however protectively disposed, care to tax them to any considerable extent, and it is left to the United States to achieve the maximum of loss and inconvenience to its industrious citizens in this respect.

The total value of all chemicals, drugs, and dyes imported in 1898 was $42,250,000, which contrasted with $45,000,000 in each of the two previous years; 1896 still enjoyed the full advantage of the comparatively mild Wilson Act; 1897 was divided, but the great rush of imports to escape the higher range of duties undoubtedly helped to swell the total, while 1898 had to bear the full brunt of them. It is interesting to note, therefore, the respective movements in free and dutiable products:—

	1896.		1897.		1898.
Free.....	$32,250,000	...	$29,750,000	...	$25 250,000
Dutiable ...	12,750,000	...	15,250,000	...	17,000,000
	$45,000,000	...	$45,000,000	...	$42,250,000

It will be noticed that whereas two years ago the free were two-and-a-half times as great as the dutiable, now they are barely 50 per cent. more.

The free chemicals are confined principally to natural products, gums for instance, and similar substances like shellac and gambier fall under this heading, and the value last year was $5,350,000, a falling off of $350,000 on 1897, and of upwards of $700,000 on 1896. Of indigo there was received 3,150,000lbs. valued at $1,825,000, no great change from the preceding year. The import of sulphur (brimstone) somewhat increased, namely from 14,000 tons in 1897, to 160,000 tons (2,000 lbs.) valued at $3,080,000 last year. In licorice root there was a very substantial gain, from 60,000,000 to 85,000,000lbs., valued at $1,380,000, but the latter amount does not vary very greatly from 1896. Nitrate of soda has by some means succeeded in eluding the vigilance of protectionist cranks, and though an indispensable fertilizer, the fact of it being for agricultural purposes might have been sufficient to penalise it in the interests of manufacturers of artificial manures, or even the proprietors of the natural deposits of phosphates. The imports in this instance are increasing, and were last year nearly 150,000 tons

(2,000 lbs.) valued at $2,300,000, against 95,000 tons and $2,800,000 in 1897. There would appear, however, to be some error in the 1898 valuation. Alizarin colours and dyes, as well as raw alizarin, have also escaped the taxing master. Last year the total quantity imported was 5,185,000lbs., valued at 735,000 dols., a drop of nearly 50 per cent. compared with 1897. In logwood, however, there was a gain from 38,000 to 51,000 tons, valued at 785,000 dols, nearly the whole of which was obtained from the West Indies, and very little from Central America. All other dyewoods were valued at 230,000 dols. The only free drug of any importance is quinine, the prepared salts of which were imported to the extent of 3,900,000 ounces, valued at $815,000, against 4,350,000 ounces, and 745,000 dols. in 1897, showing a substantial increase in price, due principally, no doubt, to the war, though under the circumstances one would naturally have looked for a much greater demand. There was a little more prepared at home, judging from the increase in cinchona bark from 2,700,000 to 3,500,000 lbs., the respective values being 200,000 dols. and 300,000 dols. As quinine is the only drug, so muriate of potash is the only important manufactured chemical on the free list, and the receipts of this were 46,500 tons, valued at 1,620,000 dols., mostly of German origin. All other free potashes declined in quantity but increased in total value, the figures for 1897 being 14,000 tons, and 775,000 dols., while for 1898 they were respectively 8,458 tons and 910,000 dols. A great number of miscellaneous articles are included in the unenumerated sundries, valued at 5,120,000 dols., a decline of 250,000 dols. from the figures of 1897.

The new duty of $^1/_5$th cent per lb., say 4 dol. 50 c. per ton on bleaching powder has not, thus far, diminished the import, possibly because American manufacturers have not succeeded in accommodating their plant to an increased production. The weight was 48,500 tons and value 1,230,000 dols. On the other hand, the increased duties on alkalies have very materially prejudiced the trade. The import of caustic soda in 1897 was over 25,800 tons, an increase on the previous year of nearly 4,500 tons, due possibly to a desire to forestall the increased duty. Last year, however, the weight fell to a trifle over 11,000 tons. Soda ash, too, has been more than halved, and the figures for 1897 were already below those of 1896. Last year's import was only 30,000 tons against 62,000. Sal. soda was proportionately worse still, as the quantity fell from 7,000 tons both in 1896 and 1897 to 2,250 tons only last year. Some compensation for these declines is to be found in the increase under the heading of unenumerated salts of soda which, from 4,000 tons in 1897, rose to 10,500 last year. The values were 115,000 dols. and 262,500 dols. respectively. Chlorate of potash is another instance of the transfer from the free to the dutiable list, with a somewhat disastrous result. The import for 1897 was nearly 3,000 tons, only about one-fourth of which came under the operation of the new tariff. Last year's figures fell to 2,150 tons, the value being 290,000 dols. The effect of the duty upon argols was not so perceptible, as the decline was only from 11,000 to a trifle over 10,000 tons.

While dyewoods are of course free, the extracts of them are dutiable, and here, again, a sharp falling off was experienced, the weight and value in 1898 being only 3,550,000 lbs. and 250,000 dols. respectively, as compared with 5,875,000 lbs. and 305,000 dols. in 1897. British extracts exceeded any others, the quantity being 1,150,000 lbs. against 850,000 lbs. only for France, where this is one of the most important chemical export industries.

Aniline and coal tar dyes maintain their ground, being valued at 3,770,000 dols., a slight improvement over 1897, and more than 1,000,000 dols. ahead of 1896. The heavy duties imposed upon raw opium have greatly, and doubtless beneficially, interfered with the import and subsequent manufacture and use, the quantity in 1898 being only 415,000 lbs. against 785,000 lbs. in 1897. The prepared drug also fell from 131,000 lbs. to 120,000 lbs. The value of glycerine, 900,000 dols, was slightly ahead of the previous year; and, finally, there is a large item for unenumerated dutiable chemicals, drugs, and dyes, valued at 5,040,000 dols., which, like the similar one for articles on the free list, showed a falling off of just 250,000 dols.

The policy pursued by the United States in its chemical industry, as in some others, absolutely debars it from competing on anything like equal terms in neutral markets, as whatever is produced under the stimulus of high protection is necessarily dear, and the creation of a surplus for export means too great a monetary loss to be willingly faced. We are not suprised to find, therefore, that the total export value is only 9,730,000 dols.; indeed, we ought rather to marvel that it is so much. That great American speciality, patent and proprietary medicines, however, accounts for some 25 per cent. of it, the value being 2,305,000 dols., a decrease of some 200,000 dols. on the previous year, which looks as though the world has had at last about enough of these concoctions. There is no other item of real importance in the list. The largest is ginseng, valued at 715,000 dols. Some 19,000 tons acetate of lime was shipped valued at 615,000 dols. The great copper production in the States also permitted of the manufacture and export of 6,500 tons sulphate of copper, valued at 465,000 dols. The total value of all kinds of dyes and dyestuffs was only 480,000 dols. Nothing else is of sufficient consequence to enumerate specially, but the value of the miscellaneous exports was 4,735,000 dols., a decline of 650,000 dols. from 1897.

In the much talked of development in American trade last year, chemicals do not appear to have had any share. Yet it is now one of the foremost industries of the day, and with the results which constant research are producing may, before long, be the most important of all. It may be that Americans have not sufficient plodding perseverance to make the trade a success, because it is that which is wanted more than anything else, and it is the constant application that enables Germany to beat all rivals, Great Britain not excepted, out of the field. Americans, more than any other race of mankind, want to go ahead without troubling themselves too much about detail, but they will find in the long run that the people who "lick creation" are those who move forward by steady paces, and not in ugly rushes.

THE PROGRESS OF RUSSIA AS A MANUFACTURING COUNTRY.

[SPECIALLY CONTRIBUTED.]

In 1885 the number of chemical works in Russia was 551, and in these works 16,031 workers were employed. The annual value of the production at this period was £2,535,000. Eleven years later (in 1896) the number of works had increased to 734, the workers to 43,527, and the value of the production to £10,415,000. The output of chemicals had therefore quadrupled in value during this comparatively short period, and the imports of alkali have fallen 56% within the same period of time. This growth of the Russian chemical industry, and consequent fall in the value of the imports from other countries, is of course to the detriment of the English chemical manufacturers, for in the past Russia has been one of their chief markets for heavy chemicals. The development of home industries in Russia is largely due to the initiative of M. Witte, the present Finance Minister, who is a firm believer in the value of a Protective tariff for nursing into existence new industries. In a recent speech, reported briefly in the *Times* of March 22nd, he gave utterance to what may be regarded as his creed of industrial statesmanship. He looks upon Protection as useful simply to guard the early stages of home industries. When these have attained a moderate development, and when competition between home producers has caused prices to reach a fair level, he considers Protective tariffs ought to be removed. He recognizes that Russian manufacturers will object to this exposure to external competition, when the time for it, in his opinion, has arrived. The benefit of autocratic rule is here apparent, for M. Witte can act as he and his master think best for their country, with complete independence of particular industries. M. Witte at present considers that his country requires capital to extend and develop her home industries, and all his financial genius is directed towards securing this investment of foreign capital in Russia. When this result has been secured, he evidently means to reduce the Protective tariffs, and thus to secure what all countries are seeking—flourishing local industries, with low prices to home consumers. The issue of M. Witte's plans will be followed with attention by all interested in international trade.

That some measure of success has already attended his efforts is proved by the figures given above. It may surprise some to learn that even the new electro-chemical and electro-metallurgical industries are represented in Russia. Copper refining by the electrolytic method is carried on at Kedabeg, at Nijni Novgorod, and at St. Petersburg. The works at Nijni Novgorod were founded in 1890 by Nikolajev, and in addition to refined copper, they produce zinc, antimony, and white lead.

Electrolytic alkali works exist at Zombkowice, these works being an off-shoot of the Bitterfeld works in Germany. The "Elektron" Company, of Greisheim, is also promoting a company for the manufacture of electrolytic alkali in Russia. The Solvay Company are stated by MacMurtrie to be promoting a third electrolytic alkali works of 4,000 horse-power capacity in the same country.

As regards miscellaneous manufactures, the following are a few of the most recent additions to the number of chemical manufacturing companies in Russia:—

	CAPITAL £
1. Actiengesellschaft der Rigaschen Chem. Fabrik "Glover"	158,000
2. Baltische Gesellschaft zür Darstellung v. Baümaterialen (cement)	237,000
3. Actiengesellschaft der Asbest. Fabrik "Isolator"	79,000
4. Moskaüer Gesellschaft für pharm. u. Chem. Producten Ermans u. Co.	79,000

CYANIDE PATENTS AMENDMENT GRANTED.—The Australian Gold Recovery Company, Limited, has received a cablegram from Australia intimating that the Victorian Court of Appeal has granted the amendment of this company's MacArthur-Forrest, Victorian patent.

Legal Intelligence.

SUPREME COURT OF JUDICATURE.

COURT OF APPEAL.

Before the Master of the Rolls and Lords Justices Rigby and Vaughan Williams.

THE CASTNER-KELLNER ALKALI COMPANY v. THE COMMERCIAL DEVELOPMENT CORPORATION (LIMITED).

This was an appeal in a patent action against a decision of Mr. Justice Bigham (sitting as an additional Judge of the Chancery Division). At the hearing of the appeal, which took a considerable time, judgment was reserved. It was delivered on Friday last. The action illustrates the race that is now going on in the patent and manufacturing world to produce the most economical mode of obtaining caustic soda and chlorine from salt, and for that reason is of considerable interest to many persons. The plaintiffs are the owners of a patent taken out by one Castner for a process by which an electric current is passed through a solution of salt over mercury, which acts as a cathode. The salt is decomposed, the chlorine given off and caught, the sodium is amalgamated with the mercury, which is held at the bottom in a shallow vessel, below both the salt solution and a vessel containing water, the mercury acting as a seal to each vessel. By some means the amalgam is shifted, so that where stronger in sodium it is exposed to the water, where weaker to the salt solution; the oxygen in the water acts on the sodium near it, part of the water being decomposed hydrogen set free, and caustic soda formed. The plaintiffs also own a later patent taken out by one Kellner, and on that they are suing in this action. They sought to restrain the defendants from using a still later patent by one Rhodin, as being a breach of the Kellner patent. The defendants alleged anticipation of Kellner's patent, want of conformity between the provisional and complete specifications, want of subject matter, and, lastly, no infringement as defences. Mr. Justice Bigham decided in favour of the plaintiffs. The learned Judges of the Court of Appeal differed. The Master of the Rolls held that the Castner patent was void, because the complete specification differed from the provisional specification in that a bed of stationary mercury was contemplated by the provisional specification, and moving mercury was in fact used. Lord Justice Rigby took the same view, and also considered that Kellner's patent was void for want of subject matter; in other words, that there was no invention. On the other hand, Lord Justice Vaughan Williams agreed with the learned Judge in the Court below. In the result the decision of Mr. Justice Bigham was reversed.

Mr. T. Terrell, Q.C., Mr. Astbury, Q.C., Mr. McConkey, and Mr. J. H. Gray were for the defendants; Mr. Moulton, Q.C., Mr. Bousfield, Q.C., Mr. J. C. Graham, Mr. A. J. Walter, and Lord Robert Cecil were for the plaintiffs.

The Master of the Rolls said: This is an action for the infringement of a patent, but it is brought under very unusual circumstances. In the first place, the plaintiffs' patent (that is Kellner's of 1894) has never been used for any commercial purpose, nor, indeed, at all, except perhaps by way of experiment. Its non-user is not explained by the fact that, although new and useful when obtained, it has been superseded by a later invention; for such is not the case. The patent sued upon has not been used because a prior patent belonging to the plaintiffs has been found to answer their purpose better; but this prior patent is not relied upon by the plaintiffs in this action. In the next place the defendants have not yet begun work, so that no infringement in fact by what they actually do can be proved. They have, however, constructed some apparatus according to another patent (Rhodin's of 1896), and they have admitted that they intend to use this apparatus. But it is obvious that, if in practice it were found desirable to depart from some of the directions contained in that specification, such departure might have a very material bearing upon the question whether the defendants really infringed the plaintiffs' patent. I make this observation because Rhodin's specification refers to the slow rotation of one of its component parts; whereas it seems plain that much better results are obtained by a quick rotation of the same part. If the defendants' apparatus were at work, I am satisfied by the evidence that the part to which I am referring would be rapidly and not slowly rotated. But if this were so, the effects produced would be so different that the question of infringement would, in my opinion, assume a totally different aspect. Again, when defendants begin to work they may find it better to keep what are called their bells stationary, and to rotate the trays or troughs in which they stand. They are under no obligation to work precisely in the manner described by Rhodin. But if such a modification were made, the question of infringement would be totally different from what it is if we are to assume that the defendants intend to make no departure from *the directions contained in* Rhodin's specification. Again, in the Court below, when comparing the processes described in Kellner's and Rhodin's specification, Mr. Terrell made a very important admission in favour of the plaintiffs. He admitted that "if there is no distinction between a rotatory movement and the to-and-fro movement described in fig. 1" of Kellner's specification, "then there is no other practical distinction between my apparatus and theirs." This admission was not really referred to by Mr. Justice Bigham, and it is very important, as the plaintiffs' patent is for an apparatus, and not merely for a method of making soda. But to treat this admission as an admission by the defendants that their apparatus, as they will use it, necessarily amounts to an infringement of the plaintiffs' patent, even if it is valid, appears to me to be pushing the admission much further than is just to the learned counsel who made it, or to his clients, who would suffer the consequences of it. I pass now to consider the first point which arises in this case, and that is the nature of Kellner's invention as disclosed in his provisional specification. The invention is for an improved apparatus. The real nature of that invention is, in my opinion, quite clear. It is an apparatus for moving an open-mouthed vessel, containing an electrified solution of salt, over a stationary layer of mercury covered with fresh water. The vessel is to be moved in such a way that the electrified salt solution is in contact with part of the mercury for a time, and then be shifted to another part, so that the mercury which has been acted upon by the salt water and thus converted into an amalgam of mercury and sodium, is brought into contact with the fresh water, which then decomposes the amalgam into mercury and soda in solution. That was Kellner's invention, and, so far as I can judge, it was novel and useful. Kellner showed in his provisional specification one mode of carrying it out—viz., by a to-and-fro motion of the vessel or bell containing the salt solution. But it was quite competent for him to point out in his complete specification any better method of presenting the mercury first to the salt water and then to the fresh, provided he kept the mercury as quiescent as possible. This last point, however, was one of the essential features of his invention. The importance of having a stationary mercury cathode, the shifting of the bell, and the non-shifting of the amalgam formed in it, the care taken to make openings in the lower ends of the bells so as not to displace the mercury, and the description showing how to work the apparatus whilst the mercury cathode itself remains at rest, all show that the great aim of the inventor was to keep the mercury as quiet as possible consistently with moving the bells of salt water over its surface. This was very important in order to distinguish Kellner's invention from Castner's prior invention, in which the mercury was moved rapidly from the mouth of one compartment containing salt water to the mouth of the other containing fresh water. I have carefully studied Kellner's specification and also the evidence of the experts called on both sides, and, notwithstanding what is said about there being no practical difference between moving a bell through mercury and moving mercury under a bell, I am satisfied that any process by which the mercury is intentionally moved or disturbed otherwise than to the least possible extent by moving bells of salt water over it, is outside and not fairly within Kellner's real invention as disclosed in his provisional specification. Here I differ from Mr. Justice Bigham. I do not attach importance to figure 6 in the complete specification, and in which the positions of the salt water and fresh water are reversed; that is a modification consistent with the real invention described in the provisional specification. Further, I am not prepared to hold, especially having regard to the admission made by Mr. Terrell, as already mentioned, that the mere substitution of a rotatory motion for a to-and-fro motion of the bells would not be equally within Kellner's invention as described in his provisional specification, provided always care were taken to keep the mercury still. But the claim No. 3, and figures 7 and 8, to which it refers, form, in my opinion, an entire departure from the essential feature of his invention as originally described. Here the mercury is intentionally not kept as still as possible, but may be moved and disturbed to any extent. This is quite inconsistent with the original idea; an invention for an apparatus for keeping the mercury still is not an invention for keeping the mercury moving. Claim No. 3 covers both inventions, and is such a departure from, and such an extension of, Kellner's real invention as to render the patent sued upon invalid as it stands. Very possibly the defect can be cured by a disclaimer; but whether when so cured the patent will be infringed by the defendants it would be quite improper now to decide. If I am right in thinking that the defendants' apparatus cannot be worked with advantage unless the mercury is kept in rapid motion, and not kept as still as possible, the plaintiffs will be well advised to reconsider their position before they commence a fresh action on an amended specification. In my opinion the judgment ought to be reversed and be entered for the defendants with costs, and the plaintiffs must pay the costs of the appeal.

Lord Justice Rigby said he proposed to deal exclusively with the question of the validity of the Kellner patent. If, as in his judgment was the case, the patent could be shown to be invalid, it would be an academic question whether then on the specification, if it were valid, there was an infringement. The grounds alleged for invalidity were disconformity and want of subject matter. He would deal mainly with

the question of invalidity on the ground of disconformity. In a very long judgment his Lordship came to the same conclusion as the Master of the Rolls on this part of the case, and said that was the main ground for his decision as to the invalidity of the patent; but, going further than the Master of the Rolls had done, he would add a few words as to subject matter. Even if it could be shown that the objection of disconformity failed, there would remain that of want of subject matter. His Lordship examined evidence on this part of the subject, pointing out among other things that the plaintiffs, after they had got possession of the Kellner patent, expended a considerable sum in setting up plant for manufacture under the older Castner process, whereas there was no evidence from experience or even experiment that the Kellner process would be practically workable, and came to the conclusion that the Kellner patent was bad for want of subject matter, and that the appeal therefore should be allowed.

Lord Justice Vaughan Williams said he did not think that Kellner's patent was bad for disconformity or otherwise and he regretted that he would have to go into the whole question of the Kellner patent and its relation to the Rhodin patent. His Lordship then explained the objects and methods of three patentees, coming to the conclusion that the Kellner complete specification was covered by the terms of the provisional specification, and, further, that it contained a novel and useful invention. As to the Rhodin patent, he came to the conclusion that, whether it was or was not an improvement on the Kellner patent, the working of it would be an infringement of the Kellner patent. In dealing with the defence of anticipation he said the only anticipation which was seriously argued was the Castner process. It was said that the Kellner patent was anticipated by the Castner because the movement of the chambers above the mercury was a mere mechanical equivalent for the flow of the mercury under the chambers. He thought not, having regard to the object in view. Castner wanted to produce churning of the mercury; Kellner wished to avoid it. Castner's process did produce churning; Kellner's to a large extent avoided it, and was intended so to do. Then it was said that Castner's double chamber was an anticipation of Kellner's double chamber. Here again he thought not. Castner's double chamber was fixed and a part of a single structure. Kellner's was detached and movable, being, in fact, one of two rigid structures. Then as to the defences of want of invention, want of utility, and want of subject-matter, which more or less hung together, he thought they all failed. He thought there was sufficient ingenuity to constitute an invention entitled to a patent. He thought that the invention was not only ingenious, but useful. It offered a useful alternative method of producing caustic soda by the electrolytic mercurial process. It offered a method of producing caustic soda with a low electric current by dealing with surface patches of sufficiently still mercury. This he considered a distinctly new method. It was urged that this was not what was put forward by Kellner as the advantage of his apparatus, but that what he put forward as the advantage was that a considerable output could be obtained from the apparatus with a comparatively small quantity of mercury, because both operations could take place simultaneously and uninterruptedly. Now, that the output could be obtained with a comparatively small quantity of mercury was true, and indeed he thought that the evidence showed that the output could generally be obtained with a smaller quantity of mercury than that necessary for the Castner process; but the reason given by Kellner was not the true reason, for in Castner's process the operation took place simultaneously and uninterruptedly just as much as in Kellner's. But he did not think this inaccuracy of any importance. Kellner was not summarising the action of his apparatus. He was mentioning some of the advantages of his process. He was under no obligation to specify any advantage his apparatus possessed in comparison with existing apparatus, and he (the Lord Justice) did not think that a mistake in the statement of the advantages of his apparatus debarred him from relying on its true utility, if such it possessed. The real difficulty, he said, which he had about the utility of the Kellner invention was this. The Kellner apparatus had never been worked. The plaintiffs themselves did not work it, possibly because they had their doubts whether an apparatus necessarily worked with a low electric current could be worked commercially at a profit. No evidence was offered by the plaintiffs to show the output to be expected from the Kellner apparatus nor the expense of working it. Moreover, it seemed almost an abuse of the statute of monopolies to use letters patent for an invention which the patentee or his assignees did not care to use in actual manufacture to prevent the user of a machine, which on the evidence seemed likely to prove a very effective machine. On the other hand, the defendants' machine had only been tried experimentally. The result of this state of things was that the whole case was very difficult to deal with. The Court had to deal with two documents rather than two processes in actual use commercially, and he had come to the conclusion that the plaintiffs' apparatus was proved by the evidence to have sufficient utility as affording theoretically a novel alternative mode of producing caustic soda by an electrolytic mercurial process. He therefore thought the judgment of Mr. Justice Bigham was right.

Reports of Companies.

NEW JULIA NITRATE CO., LTD.

A meeting of the creditors was held recently at the Cannon-street Hotel to consider a scheme of arrangement. Mr. G. S. Barnes (Senior Official Receiver), who occupied the chair, stated that the meeting had been convened by order of Mr. Justice Wright for the purpose of considering a scheme which would be explained to them. He knew nothing about the proposal, having been appointed to preside for the simple purpose of reporting their views to the Court. Mr. P. C. C. Francis (solicitor) had been nominated by the gentlemen who had prepared the scheme to give particulars with regard to it, and he would ask that gentleman to do so. Mr. Francis said that it was proposed under the scheme to form a new company with a nominal capital of £21,000., divided into 420,000 shares of 1s. each. On registration of such new company the whole of the existing company's undertaking was to be sold and transferred and its liabilities to be undertaken by the new company; 400,000 shares of 1s. each in the new company, being part of the consideration for the transfer of the undertaking, would be issued as fully-paid and distributed among the members of the existing company, in proportion to the capital held by them in discharge of all claims on the assets of the old company. With regard to the debentures for £20,000. which the new company would have power to issue, they would bear interest at the rate of 8 per cent. per annum, payable until 1905 out of profits only, and would be redeemable at 105 per cent. of their full value. The debentures would be offered for subscription in the first instance to the members of the old company at par in proportion to the amount of capital therein held by them. All proceedings in the liquidation of the old company, except for the purpose of carrying out the scheme, were to be stayed. He concluded by moving a resolution approving the scheme. Mr. Warmington seconded. Mr. Moutrie inquired if it were the fact that the £20,000. of debentures proposed to be issued had been guaranteed. A cash offer of £14,000. had been made for the company's property, so that it seemed to him that the creditors were secured whether the scheme was carried or the cash offer accepted. That being so, the question was, which would give them 20s. in the pound at the earliest possible date? He noticed that the promoters of the scheme were given up to June 30 for issuing the debentures, and such further time as the Court might allow. It might therefore be Christmas before the debentures were issued. Mr. Hume was of opinion that, so far as the creditors were concerned, they were more or less covered. Therefore they had to consider more what would be in the interest of the company generally than of the creditors exclusively, and as he thought that the scheme would be advantageous both to the company and to the creditors he should support it. Mr. Francis, in reply, said that an influential bank had promised to guarantee the issue of the debentures, subject to the scheme being sanctioned by the Court. The resolution was carried, with one dissentient, Mr. Moutrie, a creditor for £40. A meeting of the contributories was afterwards held, Mr. Barnes again presiding. Mr. Francis, in the course of further observations on the scheme, said that the shareholders would retain the same proportion in the capital of the new company as they had in the existing one, but the nominal value of the shares would be reduced from 10s. to 1s each. The total liabilities of the company, including a disputed claim of £8,000. by the Tal-tal Company, amounted to £15,313, and the question arose how they were to meet that debt. That difficulty had been overcome by the offer of the promotors of the scheme to lend the company £20,000. on debentures. When the time came for redeeming the debentures the holders would be given the option of receiving the premium on them in shares in lieu of cash, £1,000. of shares being reserved for this purpose. These £1,000. of shares would be entitled to one-half of the profits. By the scheme the shareholders kept their proportionate interest in the company without any assessment, and they would have the right of applying for their quota of the debenture issue. In conclusion, he moved a resolution in favour of the adoption of the scheme. Mr. E. P. Parsons seconded the resolution, and, speaking as a member of the shareholders' committee, said that they stood on a different platform from Mr. Moutrie, who was a director of the last company, which went into liquidation. Mr. Moutrie admitted that the scheme was not a bad one if there were any chance of the company in future earning profits. After further discussion, in which it was stated that, if the scheme were carried into effect, the Tal-tal Company would withdraw their disputed claim, the resolution was voted on, and the chairman announced that the result would be obtainable at his office. He added that proxies had been lodged in favour of the scheme representing 101,620 shares, and proxies for 89,963 shares against it. With regard to the proxies against the scheme a serious question would arise, as those representing 68,000 shares were not on the form settled by the Court.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols remain very depressed, there being, apparently, very little hope for an improvement. Price for 90's is still 7½d., and for 50/90's 7¾d. to 8d. There is nothing fresh to report in connection with carbolic acids, the demand being satisfactory at recent values. Naphthas, however, are easier, this being most noticeable in the case of solvent, which is now quoted 1s.; crude is unaltered. Pitch keeps steady at 27s. 6d, f.o b. East Coast.

Sulphate of ammonia is firmer, and shows signs of increased activity. Makers appear fully alive to the possibilities of the situation. Closing prompt values are: --Beckton, £10 15s.; London (outside makes), £10. 17s 6d. to £10 18s. 9d.; Hull, £10. 16s. 3d.; and Leith, £10. 17s. 6d. For May/June delivery, £10. 12s. 6d. is asked both at Hull and Leith. Nitrate of soda firm.

MISCELLANEOUS CHEMICAL MARKET.

With a continuance of good demand, both for home and foreign markets, alkali works, generally, are well engaged with orders. For bleaching powder there is active inquiry for export, and price firm at £5., hardwoods, f.o.b. Liverpool. For home trade there is no improvement, and price remains at £4 2s. 6d. to £4. 5s., f.o.r. makers' works. Chlorate of potash and soda are unchanged in quotation and somewhat quiet. For caustic soda values are steady, and current quotations are as follows, f.o.b. Liverpool:—77%, £7. 12s. 6d.; 74%, £7. 7s. 6d.; 70%, £7.; 60%, £6. per ton. Ammonia alkali, 58%, firm at £3. 17s. 6d., bags, f.o.r. In soda crystals and bicarbonate of soda, prices are unaltered. Leblanc ash nominal at 1⅛d. per degree, f.o b. Saltcake, 29s., in bulk, f.o.r. Sulphur steady at £4. 11s. 3d. per ton. Sulphate of copper very firm at £25, f.o.b. There is good inquiry for potash, caustic and carbonate, and prices are well maintained. Nitrate of soda rather easier at 8s. 3d. per cwt. Price for brown acetate of lime still rules low at £4. 17s. 6d. to £5., ex ship; grey, £7. 17s. 6d. per ton. White sugar of lead has fallen to £24. 10s., c.i f.. and business is only quiet thereat. Acetate of soda remains steady at £12. 15s, c.i.f. Acetic acids in moderate request, but without improvement in values. Muriate of ammonia rather lower at £18. 10s. to £19. White powdered arsenic firm and in good demand at £18. 10s. to £18. 15s. per ton, Garston. Prussiate of potash firm at 7¼d. to 7⅝d. per lb.; soda, 6d. per lb; cyanide, 1s. 1d. per lb. For miscellaneous chemicals trade is generally reported quiet.

REPORT ON MANURE MATERIAL.

The activity in mineral phosphate in the forward position referred to in last report continues, and a considerable volume of business has been done both for United Kingdom and Continent. Quotations are maintained, but the tendency of prices is to advance for all grades. Sellers of Bombay bone meal are firm at £5. per ton, ex quay Liverpool, and sales have been made thereat. There is nothing to report in River Plate bones. Nitrate of soda is, owing to arrivals, a shade easier, and fine quality can now be had at 8s. 4½d. per cwt., ex quay.

LIVERPOOL OIL AND COLOUR MARKET.

Wednesday.

OILS.—Palm oil is very quiet, there being next to no business doing. Olive oil is also quiet, but keeps steady owing to spot supplies being short. Linseed is in fairly good request, with Liverpool makes at 19s. to 19s. 6d. cwt. in export casks. Cottonseed is firm, Liverpool refined being quoted 17s. 6d. to 18s. Castor oil is dull, and buyers scarce. Values are still given as 2⅞ to 2 15/16 for good seconds Calcutta, and 2¾ for first pressure French. Tallow steadier, but without change in values. Resin continues to move fairly well at recent prices. Spirits of turpentine are easier, now being quoted 33s. 3d., and quiet thereat. Petroleum quiet at 6d. to 7¼d per gallon for American, and 5¼d. to 5¾d. for Russian.

CAKES.—Values of spot parcels of American Western linseed are again the turn in buyers' favour, but the consumptive inquiry has been on only a moderate scale at £5. 11s. 3d to £6. 2s. 6d., whilst in other imported descriptions River Plate remain fairly steady at £6 10s. to £6. 15s.; Bombay are still scarce, and are now quoted at £7. 2s. 6d. to £7. 3s. 9d. Russian are almost neglected, and the quotation is now given at £7. 5s. to £7. 7s. 6d. per ton, and is somewhat nominal thereat. A further reduction in the value of Liverpool makes is also quoted, but consumers have bought to a very fair extent, and the market close steady, sellers quoting £7. 10s. to £8. 10s. per ton, according to brand. American decorticated cottonseed are firm in tone, with moderate sales making at about former currencies for good to choice brands, viz., £5. 10s. to £6, according to quality, but there is only a moderate business doing in Liverpool makes at £6. 5s. to £6. 15s. per ton, according to brand. Undecorticated Liverpool makes are moving off to a moderately fair extent at recent rates, viz., £4. 15s. to £5. 5s., according to brand, and Egyptian are also without alteration at £4. 7s. 6d. to £4. 10s. per ton, as in quality and quantity.

HULL PAINT, OIL, AND COLOUR REPORT.

Tuesday.

OILS.—The markets here are quiet but values steady, at a trifle easier prices than those recorded a week ago. The imports to date have been:—Wheat, 636,196 qrs. against 695,066 qrs.; flour, 155,918 cwt. against 55,550 cwt.; linseed, 131,555 qrs. against 111,577 qrs.; oilcakes (linseed), 8,269 tons against 6,277 tons; rapeseed, 43,870 qrs. against 24,539 qrs.; cottonseed, 59,894 tons against 86,076 tons same time a year ago; olive oil, 971 tuns against 1,699 tuns; tar, 898 brls. against 675 brls. Linseed oil is steady, being quoted 17s. 3d. spot, naked, per cwt.; 17s. 1½d. month; May/August, 16s. 7½d.; last four months, 16s, naked; boiled and refined, £1. to £1. 10s. per ton extra. Refined cottonseed oil quiet, being quoted 15s. 10½d. spot, naked; 15s. 9d. to August; crude ditto, 14s. 9d. spot and month; barrels, £1. 10s., and ordinary casks, £1. per ton extra. Castor oil, extracted here, cold drawn pharmaceutical, in barrels, 28s. per cwt.; in cases, 3 1/16d. per lb.; pure first pressure, in barrels, 25s. per cwt.; in cases, 3⅛d. per lb; seconds, 25s. per cwt. in barrels; 2 15/16d. per lb. in cases. Resins in fair demand, prices unchanged. Olive oil quiet, values unchanged. Olive oil soap from £15. per ton to £17. ex quay. Oleines unchanged, £18. 10s. to £21. per ton. Cod oil, £16. to £18. per ton. Wool grease continues high in price. Swedish and Danish butters, 105s. to 112s. per cwt.; Dutch, 103s. to 107s. per cwt. Colonial, 100s. to 108s. per cwt. American pail lard, 29s. 6d. to 30s 6d. per cwt.

CAKES.—Report says that the negotiations of American syndicate towards forming a trust amongst all the seed crushers in London, Liverpoool, and Hull have reached a critical stage. Linseed cakes are steady; 95% pure being quoted £7. 12s. 6d. to £7. 15s. per ton. Oilcakes (linseed), £6. 12s. 6d. to £6. 15s. per ton. Russians, £6. 15s. to £7. 5s. Cotton cakes firm: best makes, £5. to £5. 2s. 6d. per ton; seconds, £4. 17s. 6d. to £5.; decorticated, £6. to £6. 2s. 6d. Rape cakes: Black Sea, £4. per ton.

PAINTS.—Makers are not so busy as they should be for the season. Prices are unchanged. Ready mixed paints quoted from £24. per ton in tins; ordinary colours in oil from £10. Varnishes still dear owing to turpentine. Black varnish, £5. per ton in barrels, &c.

WEST OF SCOTLAND CHEMICALS.

Glasgow, Tuesday.

There is still some improvement going on as regards the tone of the market generally; although, perhaps, the total of the bettering does not amount to much after all. The export department is adding some little life as the season advances, and bleaching powder and soda crystals are both of them a shade firmer. Lead and copper chemicals are all rather firmer, and sulphur continues scarce. Sulphate of ammonia has rounded into the upward movement again, and done well already, £10. 18s. 9d. having been got for prompt f.o.b. Leith, while some makers hold out for £11. Forward business has also come away more freely, at £10. 5s. to £10. 7s. 6d. done, and quotations rather on the rise. In the mineral oil and solid paraffin section the old prices hold, except for paraffin spirit (naphtha), which is a shade easier at 9d. to 9½d. The season for burning oil is now nearly at its close.

Chief prices current are:—Soda crystals, £2. 5s. to £2. 7s. 6d. basis nett, Tyne; soda ash, £4. 2s. 6d. to £4. 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 5s. to £4. 15s. nett, Glasgow; caustic soda, white, 74° £7. 7s. 6d., 70/72° £7., 60/62° £6., and cream 60/62° £6., all nett, Liverpool; bleaching powder, 35/37°, £5. 5s. to £5. 10s. nett, Tyne; saltcake, 30s; borax, English refined, £16., and boracic acid, £26. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s., nett, Liverpool; bichromate of potash, 3½d., less 6% for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d., less 6% for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow); chlorate of potash, 3⅝d., less 5% Liverpool; nitrate of soda, 8s. 4½d. to 8s. 7½d.; sulphate of ammonia, £10. 17s. 6d. to £11. prompt, f.o.b., Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £24. 15s., less 5% Liverpool; paraffin scale, hard, 1⅞d. to 2d. per lb., and soft 2d. per lb.; paraffin wax, 120° semi-refined, 2¼d. to 2½d. per lb.; paraffin

spirit (naphtha), 9d. to 9½d. per gal ; paraffin oil (burning), No. 1, 6¼d.; and crystal, 6¾d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower) ; ditto (lubricating) 865° £4. 15s. to £5. 5s., 885° £5. 10s. to £6., and 890/895° £6. 5s. to £6. 10s. Week's imports of sugar at Greenock were 7,320 bags cane unrefined, and 2,600 bags beet unrefined.

TYNE CHEMICAL REPORT.

TUESDAY.

Chemicals are in slightly better demand, and shipments are being made more freely. Prices are practically unchanged. Caustic soda is quoted on a basis of £7. for 70%, and £8. per ton, for 76/77%. Soda crystals, £2. 12s. 6d. per ton, gross weight, locally. Sulphur steady at £4. 12s. 6d. per ton.

Bleaching powder, softs, £5. 10s. per ton, nett ; do., hards, £5. 15s. per ton, nett ; caustic soda : 76/77% £8., and 70% £7. per ton, nett ; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett ; soda ash, 48%, £4. per ton, nett ; do., 50%, £4. 2s. 6d. per ton, nett ; do., 52%, £4. 5s. per ton, nett ; alkali, 36%, £3. 12s. 6d. per ton, nett ; white alkali, 48% £5. per ton, nett ; do., 50%, £5. 5s. per ton, nett ; do., 52%, £5. 10s. per ton, nett ; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett ; do , 1 cwt. kegs, £7. per ton, nett ; silicate of soda, 75°Tw., £2. 12s. 6d. per ton, nett ; do., 100°Tw., £3. per ton, nett ; do., 140°Tw., £3. 7s. 6d. per ton, nett ; soda crystals, casks, £2 12s. 6d. per ton, gross weight ; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. 0d. per ton, nett; blanc fixe, £6. 10s. per ton nett ; chloride of barium, refined crystals, £6. 15s. 0d. per ton, nett ; do., crude calcined, £6. 5s. per ton, nett ; carbonate of alumina, £30. per ton, nett ; aluminate of soda, £30. per ton, nett.

SALT.—Steady at 9s. 6d. per ton, f.o.b. Middlesbro', and in fair demand.

COALS.—Trade continues very firm and, with the exception of gas coals, the demand shows no signs of falling off. Coke is very strong and high prices are being asked ; 22s. 6d. per ton is now about the current quotation. To-day's prices are :—Best Northumbrian steam, 12s. 3d. to 12s. 6d. per ton ; second qualities, 11s. 3d. to 11s. 6d. per ton ; small steam, 6s. 0d. to 6s. 3d. per ton ; bunker coals, scarce, 9s. to 9s. 3d. per ton ; gas coals, 10s. to 11s. per ton ; coke, very firm, 22s. 6d. per ton.

New Companies.

African Oil Exploring Co., Ltd.—CAPITAL £40,000. in £1. shares. This company has been formed to acquire any petroleum or oil-bearing lands in Africa or elsewhere, and to deal in and refine petroleum and other mineral oils and products thereof. The subscribers to the memorandum of association are :—H. W. Brown, 59, Mackenzie-road, Beckenham, journalist ; A. W. Lawson, 43, Forest Drive West, Leytonstone, secretary ; E. T. Church, 34, Geneva-road, Brixton, clerk ; J. W. Honess, 35, Florence-road, Wimbledon, gentleman ; H. J. Newell, 2, Clifton Villas, Wembley, Middlesex, clerk ; H. F. Garret, 54, Gloucester-street, Bloomsbury, secretary ; J. A. Fuller, 50, Chatterton-road, Finsbury Park, N., clerk.

Henry Leetham and Sons, Ltd.—CAPITAL £575,000. in £5. shares. This company has been formed to adopt an agreement with S. Leetham, H. E. Leetham and A. Leetham, and to carry on the business of flour millers, grain and seed merchants, and manufacturers of and dealers in feeding stuffs, oil and seed cakes, etc. The subscribers to the memorandum of association are :—Mrs. M. Leetham, Moorlyn, York ; S. Leetham, Elm Bank, York, corn miller ; Mrs S. Leetham, Elm Bank, York ; H. E. Leetham, Aldersyde, York, corn miller ; A. Leetham, Shelley, Holgate, York, corn miler ; H. Leetham, Beech House, York, retired corn miller ; R. E. Leetham, Moorlyn, York, corn miller.

Keratol Syndicate, Ltd.—CAPITAL £15,000. in £1. shares. This company has been formed to adopt an agreement with the Central Finance Corporation, Ltd., and to manufacture, sell, and deal in chemicals, drysalteries, sanitary and disinfectant preparations, drugs, dyes, paints, colours, oil, soap, etc. The subscribers to the memorandum of association are :—D. N. Shaw, Gwyder Lodge, Pollokshields, N.B., managing director ; J. Paton, 16, Reservoir-road, Brockley, S.E., clerk ; A. Phillip, 30, Dalkeith-road, Ilford, clerk ; J. Kerry, Deveron House, Highbury New Park, N., gentlemen ; E. A. Robinson, 91, Palace road, Streatham Hill, S.W., gentleman ; J. W. Scott, 22, Kestrel Avenue, Herne Hill, S.E , engineer ; G. Pearson, Helvetia, Ilford, Essex, gentleman. Registered office, 20, Bishopsgate-street Within, E C.

IMPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.

Week ending April 8th.

Acetic Acid—		
Holland,	103 pks.	A. & M. Zimmermann
Alkali—		
Germany,	5 t.	J. Barber & Co.
Holland,	10	,,
Ammonium Chloride—		
Sweden,	1 pk.	G. Boor & Co.
Antimony Ore—		
Australia,	6 t.	J. J. Pratt & Son
France,	25	H. R. Merton & Co.
Japan,	1	H. Kiver & Co.
Barium Nitrate—		
Holland,	£30	Petri Bros.
Barium Sulphate—		
Belgium,	69 cks.	J L. Lyon & Co.
Germany,	40	,,
Belgium,	86 brls.	O' Hara & Hoar
Baryta—		
Germany,	£100	H. Lambert
Barytes—		
Belgium,	33 cks.	W. Harrison & Co.
,,	38	J. L. Lyon & Co.
Germany,	67	,,
,,	57	W. Harrison & Co.
,,	18	W. Balchin, Ld.
Holland,	24	O'Hara & Hoar
,,	40	P. Jantzen
,,	24	J. Barber & Co.
,,	13	W. Bauer & Co.
Bleaching Powder—		
France,	89 cks.	J. M. Steel & Co.
Bones—		
Belgium,	1 t.	Cartledge & Batchelor
Canaries,	17	West & Penrose
Boracic Acid—		
Germany,	20 pks.	Butler's Wf., Ld.
Bromine—		
Germany,	20 cs.	A. & M. Zimmermann
Caoutchouc—		
France,	50 c.	H Johnson & Sons
Lomas,	4	L. & I. D. Jt. Co.
Zanzibar,	18	,,
,,	7	Hale & Son
Straits,	19	E. Boustead & Co.
,,	64	Butler's Wf., Ld.
,,	50	Anderson, Weber & Smith
Colon,	1	,,
,,	47	Hoare, Wilson & Co.
Germany,	5	Butler's Wf., Ld.
,,	240	Lon. & Til. Ltge. C. & D. Co., Ld.
Colombia,	25	Chalmers, Guthrie & Co.
Germany,	9	F. Huth & Co.
Holland,	3	W. M. Smith & Sons
Madagascar,	7	F. Boehm
France,	66	Burnett Brs. & Sons
E. Indies,	2	Forbes, Forbes & Co.
Aden,	16	Wallace Bros.
,,	64	Butler's Wf., Ld.
Zanzibar,	21	L. & I. D. Jt. Co.
U. States,	6	G. T. Burton & Son
Colon,	30	Prop. Bull Wf.
Germany,	60	,,
France,	11	,,
Castor Oil—		
Belgium,	70 cks.	E. & C. Morton
,,	40 brls.	Humphrey & Co.
Italy,	20 cs.	Hodkinsons, Clarke & Co.
Belgium,	16 cks,	J. Harrison
E. Indies,	92 dms.	Montgomerie & Workman
France,	28 brls.	Mordaunt Brs.
,,	40	Lucas & Spencer's Wf., Ld.
Caustic Potash—		
France,	45 c.	J. A Reid
Belgium,	5 cs.	Vinolia Co.
France,	20 dms.	Petri Brs.
Chemicals (*otherwise undescribed*)		
Belgium,	£5	John Cockerill Line
France,	11	Mory & Co.
Germany,	8	Craven & Co
,,	33	R. W. Greeff & Co.
,,	9	Argo S. S. Co.
U. States,	10	American Express Co.
Holland,	60	H. & J. Dutfield
,,	20	B. Jacobs & Sons
Germany,	1,010	L. & I. D. Jt. Co.
U. States,	505	H. Harkness
Belgium,	20	C. Atkins & Nisbet
,,	167	T. Palmer
Holland,	12	T. H. Lee
Germany,	6	Craven & Co
,,	8	W. Pope & Co.
,,	5	Brasch & Rotheinstein
,,	211	A. & M. Zimmermann
Sweden,	10	M. D. Co.
Coal Products—		
Carbolic Acid		
Germany,	100 pks.	J. G. Back
Naphtha		
Belgium,	30 cks.	Burt, Boulton & Co.
Pitch		
N. Russia,	100 brls.	Matthews & Luff
,,	225	Fellows, Morton & Co.
Austria,	13	Sir C. Price & Co.
Tar		
N. Russia,	64 brls.	Mordaunt Brs.
,,	253	F. & S. Chiesman
,,	18 cks.	& Co.
Cobalt Ore—		
Australia,	147 t.	C. H. Gare
Cream of Tartar—		
Holland,	20 cks.	Kirkpatrick, Barr & Co.
France,	10	W. C. Bacon & Co
Dyestuffs—		
Argols		
Italy,	296 pks.	Thames S. T. & L. Co., Ld.
Greece,	3	D. Magnus
Cochineal		
Canaries,	1 bg.	L. & I. D. Jt. Co.
Extracts		
France,	50 cks.	B. & F. Wf. Co., Ld.
,,	135 pks.	Boutcher, Mortimore, & Co.
,,	40 cks.	T. H. Lee
Indigo		
E. Indies,	40 chts.	J. W. Cook & Co., Ld.
,,	29	Kaltenbach & Schmitz
,,	34	Croysdale & Co.
,,	93	Parry & Co.
,,	71	Parsons & Keith
,,	15	Schonlank, Engel & Co.
,,	13	Lewis & Peat
,,	17	J. Hatton Hall & Co.
,,	5	H. Grey
,,	147	L. & I. D. Jt. Co.
,,	52	Park Macfadyen & Co.
,,	25 cs.	Wrightson & Son
,,	58 pks.	A. B. Curtis & Co.
,,	20	J. Owen
,,	155	Wallace Bros.
,,	69	J Karpeles & Co.
Colon,	312 srns.	Mancha & Co.
,,	60	Arbuthnot, Latham & Co.
Myrabolams		
E. Indies	600 bgs.	J. Graves
Cochin,	60	Lambert & Strong
E. Indies	3,048	L. & I. D. Jt. Co.
,,	766	Dalton & Young
,,	670	J Greig
,,	235	Hoare, Wilson & Co.
,,	11,223	W. Shelcott & Sons
Shumac		
Italy,	2,000 bgs.	Beirngton & Sons
,,	200	H. Johnson & Sons
,,	500	Bailey & Leetham, Ld.
,,	60	R. Waters
,,	500	Bowron Brs.
Tanners' Bark		
Natal,	49 t.	A. & W. Nesbitt
,,	96	Flack, Chandler & Co.
Belgium,	16	Leach & Co.
Tannin		
Germany,	8 cs.	R. W. Greeff & Co.

Tumeric
E. Indies, 96 bgs. Crosse & Blackwell, Ld.
" 30 Clarke & Smith
" 101 Anderson, Weber & Smith
" 36 G. & H. Green
" 142 L. & I. D. Jt. Co.
France, 46 pks. F. Huth & Co.

Dyestuffs *(otherwise undescribed)*
E. Indies, 939 bgs. Crosse & Blackwell. Ld.
U. States, 25 cs. T. Christy & Co.

Farina—
Germany, 150 bgs. T. M. Duche & Sons
Italy, 5 sks. C. Tennant, Sons & Co.
Holland, 100 bgs. J. Barber & Co.
Germany, 100 pks. R. Bennett & Co.
U. States, 74 Wingate & Johnson
Holland, 50 J. Knill & Co.
France, 1 cs. E. Flageollet, Parent & Co.
Holland, 2 H. Nestle
" 50 bgs. H. Lorenz

Glucose—
U. States, 50 pks. 320 c. E. Bennett & Co.
" 4,000 4,000 E. Thompson & Co.
" 250 250 Trier, Meyer & Co.
Holland, 100 120 J. Barber & Co.
U. States, 2,500 2,500 Pearce, Pelly & Co.
" 2,000 2,300 Union L. Co., Ld.
" 270 368 C. Mangold & Co.
" 500 500 Barratt, Tagant & Co.
" 2,000 2,000 Bellamy's Wf., Ld.
" 100 582 Oblenschlager Brs.
" 150 900 Deering & Robotton
Germany, 400 400 Fellows, Morton & Co.
France, 200 200 G. Clark & Son
" 200 200 Trier, Meyer & Co.
U. States, 3,500 3,500 Pickford & Co.
" 500 500 Vokins & Co., Ld.
" 1,000 1,000 C. Barnard
" 13,780 29,251 R. G. Hall & Co.
" 600 1,090 L. Norman & Co., Ld.
" 150 900 Page, Son & East
" 150 900 E. & T. Pink
" 1,250 1,250 G. Clark & Son
" 250 250 Beck & Pollitzer
" 400 2,325 W. Grose & Co.
" 200 1,178 H Johnson & Sons
Germany, 30 246 M. D. Co.

Glue—
Germany, £70 O. Schmidt & Co.
" 600 Netherlands S.S. Co.
France, 150 W. J. Davies & Sons
U. States, 12 Taylor Brs.
Holland, 30 T. H. Lee
Germany, 105 M. H. Voss
" 150 J. Barber & Co.
Holland, 243 "
Belgium, 540 J. Harrison
" 1,440 T. M. Duche & Sons
France, 1,805 "
U. States, 70 H. Grey, Junr.
Belgium, 9 Leach & Co.
Germany, 145 L. & I. D. Jt. Co.
Canada, 90 "
France, 43 Mory & Co.
Holland, 32 Phillips & Graves
Austria, 179 Steinhoff, Sons & Co.
Germany, 30 Armour & Co.
U. States, 50 Carter, Paterson & Co.

Glycerine—
Belgium, £20 T. Ronaldson & Co.
N. Zealand, 83 J. Greig

Guano—
Seychelles, 5 t. T. Souchon

Gutta Percha—
Holland, 3 c. J. Smither & Son
Straits, 10 L. & I. D. Jt. Co.
" 36 t. H. W. Jewsbury & Co.

Litharge—
Germany, 31 cks. B. Winstone & Sons

Manure—
Germany, 8½ t. F. W. Berk & Co., Ld.
" 10 Union Ltge. Co., Ld.
E. Indies, 933 A. Hunter & Co.
" 450 McDougall & Bonthron

Methyl Alcohol—
Germany, 432 g. W. Iszard
" 880 T. Jones & Co.
France, 1,260 Lister & Biggs

Molasses—
U. States, 50 cks. 315 c. C. Barnard
" 1,050 5,750 Deering & Robottom
" 1,275 8,991 J. R. Francis & Co., Ld.
" 600 3,310 G. Hornzee
" 425 2,408 J. Forsey
" 50 286 E. & C. Morton
" 10 52 Barratt & Co.
Holland, 100 554 Ohlenschlager Brs.
W. Indies, 602 bgs. 134 R. & J. J. Kirke

Ochre—
France, 30 cks. Ellam, Jones, & Co.
" 100 R. Waters
" 41 W. Harrison & Co.

Oxalic Acid—
Holland, 10 pks. R. W. Greeff & Co.

Paraffin Wax—
U. States, 300 cs. Anglo-American Oil Co.

Phosphates—
Belgium, 580 t. Anglo-Contl. Guano Works
" 201 West & Penrose
Holland, 240 D. de Pass & Co.

Potash—
Germany, 39 c. Spies Brs & Co.

Potassium Bicarbonate—
Holland, 9 cks. A. & M. Zimmermann

Potassium Carbonate—
Germany, 10 t. H. Lambert
" 6 A. & M. Zimmermann
France, 3 J. A. Reid

Potassium Muriate—
Germany, 100 bgs. F. W. Berk & Co., Ld.
Sweden, 600 pks. G. Boor & Co.

Potassium Oxymuriate—
Sweden, 20 pks. G. Boor & Co.

Potassium Phosphate—
Germany, 20 kgs. Butler's Wf., Ld.

Potassium Sulphate—
Germany, 100 bgs. F. W. Berk & Co., Ld.

Pyridine—
Belgium, 9 cks. Burt, Boulton, & Co.

Red Lead—
Germany, 6 cks. Steinhoff, Sons, & Co.

Rosin—
U. States, 634 brls. F. & S. Chiesman & Co.

Salicylic Acid—
Germany, 18 pks. Butler's Wf., Ld.

Saltpetre—
Germany, 63 cks P. Hecker & Co.
" 78 pks. "
" 280 bgs. H. Grey
E. Indies, 1,334 Lucas & Spencer's Wf.

Silver Nitrate—
Germany, 2 cs. R. W. Greeff & Co.

Sodium Hypochlorite—
Belgium, 60 kgs. Petri Brs.

Sodium Nitrate—
——— 14,961 bgs. W. Montgomery & Co.
Germany, 27 pks. Burnett Brs. & Sons

Sodium Prussiate—
Belgium, 10 cks. J. Owen
Germany, 25 "

Sodium Seleniate—
Germany, 1 bx. M. Dk. Co.

Starch—
Germany, 40 cs. Lavington Brs.
" 2,420 Horne & Co.
" 40 Argo S. S. Co.
" 4 L. & I. D. Jt. Co.
Belgium, 683 E. & T. Pink
" 245 F. Claydon & Co.
" 361 T. H. Lee
" 442 T. Ronaldson & Co.
" 217 Leach & Co.
Holland, 90 Phillipps & Graves
" 1,994 Little & Johnston
" 80 A. G. Robinson & Co.
U. States, 125 brls. Beck & Pollitzer
" 2,000 bgs. J. Forsey
" 1,800 R. G. Hall & Co
" 200 Ohlenschlager Brs.
" 200 C. Tennant, Sons, & Co.

Stearine—
Belgium, 25 bgs. T. Ronaldson & Co.
" 76 W. H. Mitchell
" 50 D. C. Thomas & Sons
" 125 H. Hill & Sons
" 9 cks. "
France, 249 bgs. "
Holland, 51 bls. J. Owen
U. States, 9 t. L. & I. D. Jt. Co.

Strontia—
Germany, £115 H. Lambert

Sulphur—
Italy, 50 t. W. C. Bacon & Co.
" 5 Soundy & Sons
" 15 J. Kitchin, Ld.
" 100 A. Hunter & Co.

Tallow—
France, 134 bgs. H. Hill & Sons
" 57 cks. C. S. Lovell
Sydney, 515 Elkan & Co.
" 184 Deering & Robottom
" 1,712 Phillipps & Graves
Queensl'nd, 103 "
Melbourne, 112 "
" 72 Elkan & Co.
" 49 pks. Hicks, Nash, & Co.
U. States, 100 cks. G. Campbell
N. Zealand, 3 N. M. & A. Co.
" 454 Goad, Rigg, & Co.
" 20 Brown & Elmslie
" 100 J. Owen
" 90 J. W. Cook & Co., Ld.
Germany, 5 T. Oertell
Channel Is., 5 Cheesewright & Ford

Tartar—
Italy, 107 cks. B. Jacob & Sons
" 10 Howards & Sons

Tartaric Acid—
Belgium, 5 pks. F. C. Devon & Co.
" 4 B. & F. Wf. Co., Ld.
Holland, 5 J. Owen

Ultramarine—
Holland, 4 cs. J. Barber & Co.
Germany, 44 Steinhoff, Sons, & Co.

Varnish—
U. States, 15 pks. Atlantic Transport Co.
" 5 Anglo-American Oil Co.
Germany, 8 Argo S. S. Co.
" 8 Butler's Wf., Ld.

White Lead—
Holland, 30 pks. Randall Brs.
" 20 cks. Kerestiji & Co.
" 49 T. & W. Farmiloe, Ld.
Belgium, 95 "
" 19 J. L. Lyon & Co.
Germany, 70 Steinhoff, Sons, & Co.
" 24 Wilkinson, Heywood, & Co.
Austria, 12 cs. T. Palmer
" 10 Gruscurth & Luboldt

Wolfram Ore—
Australia, 2 t. H. Bath & Son
" 2 H. Grey

Wood Pulp—
Sweden, 640 pks. Alsing & Co., Ld.
" 320 W. G. Taylor & Co., Ld.
" 280 Henderson, Craig, & Co.
" 40 Christophersen, Andrews, & Co.
Norway, 240 "
" 800 W. E. Bott & Co.
" 16 W. D. Cork
" 30 M. Dk. Co.
U. States, 65 W. Dixon
" 570 A. E. Reed & Co.
" 80 W. G. Taylor & Co., Ld.
" 345 Beck & Pollitzer
" 7,150 Henderson, Craig, & Co.
Holland, 72 A. E. Reed & Co.
" 80 M. H. Voss
" 74 Henderson, Craig, & Co.
" 54 C. S. Lovell
ermany, 15 H. Lambert

Zinc Oxide—
U. States, 200 brls. M. Ashby, Ld.
Holland, 75 "
Belgium, 2 cks. T. Ronaldson & Co.

LIVERPOOL.

Week ending April 6th.

Alum—
Hamburg, 2 cs.

Ammonium Sulphate—
Rotterdam, 25 cks.

Barytes—
Rotterdam, 150 bgs.

Bone Ash—
Zarate, 100 bgs. J. Nelson & Sons, Ld.

Bone Ash and Meal—
Valparaiso, 270 sks.

Bones—
Coquimbo, qnty.
Valparaiso, 846 bgs.

Boracic Acid—
Leghorn. 117 cks.

Caoutchouc—
Valparaiso, 3 bls. T. Adams & Co., Ld.

Chemicals *(otherwise undescribed)*
Hamburg, 25 pks.

Coal Products—
Naphtha
New York, 10,897 brls. 2,000 cs.

Colours—
Rotterdam, 1 cs. 3 pks.

Cottonseed Oil—
New York, 50 cs. Elder, Dempster & Co.
Charleston, S.C., 1,508 brls.

Cream of Tartar—
Bordeaux, 107 cks.
Barcelona, 15
Tarragona, 5 brls.

Dried Blood—
Zarate, 168 bgs. J. Nelson & Sons, Ld.

Dyestuffs—
Cochineal
Las Palmas, 18 bgs. Canary Is. Tdg. Co.
Cutch
Rangoon, 1,300 bas. 193 cs.
Extract
Halifax, 55 cks. Boutcher, Mortimore & Co.
Havre, 10 cks. 8 cs. Cunard S.S. Co., Ld.
Fiume, 744 brls.
Baltimore, 10 B. Williamson & Co.
Rotterdam, 30 crts.
Fustic
Kingston, 863 pcs.
Indigo
Valparaiso, 42 srns. A. Solari y Figli
Valonia
C'stantinople, 1,495 bgs.

Dyestuffs *(otherwise undescribed)*
Boston, 55 cs.

Dyewood Extract—
New York, 175 brls. M'Arthur & Co.
Philadelphia, 100

Glucose—
Boston, 400 brls. T. M. Duche & Sons
Baltimore, 450

Glue—
Philadelphia, 17 bgs. 15 brls.
Rotterdam, 40

Manganese Ore—
Valparaiso, qty. Balfour Williamson
Hamburg, 5 cks.

Molasses—
N. Orleans, 75 brls.

Paint—
New York, 20 cs. Diamond Match Co.
Boston, 65
Trieste, 4 pks.

Paraffin Scale—
Rangoon, 160 cs.
New York, 432 brls. Thompson & Bedford
Baltimore, 100

Phosphates—
Charleston, S.C. 559 bgs.
Ghent, 500 t.

Potash—
Hamburg, 10 cs. 4 dms.
St. John, N.B., 34 brls. S. W. Royse & Co.
" 37
Rosin—
Savannah, 5,200 brls.
Charleston, S.C., 1,000
Barrahona, 8 bgs. 8 Hesse, Newman & Co.
39 cs.
Salt—
Boston, 319 bxs.
Saltpetre—
Hamburg, 24 cks 20 bgs.
Soap—
New York, 194 bxs. Lever Brs., Ld.
253 crts.
Colombo, 30 cs.
New York, 25
Philadelphia, 2,000 bxs.
Boston, 6 Goodall, Backhouse & Co.
Rotterdam, 10
Soap Stock—
New York, 161 brls.
Soapstone—
Genoa, 100 bgs.
Sodium Bicarbonate—
Fiume, 50 cks.
Starch—
Boston, 125 bgs. F.W.Simmonds & Co.
Rotterdam, 60 cs.
Sulphur—
Valparaiso, 1 cs. F. Rosenstern & Co.
Tallow—
New York, 300 tcs.
Zarate, 300 pps. J. Nelson & Sons, Ld.
Philadelphia, 200 tcs.
Sydney, 978 cks. Lever Brs., Ld.
Boston, 500 tcs.
Baltimore, 150
Ultramarine—
Rotterdam, 16 cs.
Yarnish—
New York, 2 kgs. 30½ brls.
Waste Salt—
Hamburg, 1,100 bgs.
Wood Pulp—
Halifax, 16,000 bdls. A. Wertheim & Co.
Rotterdam, 333 bls.
Halifax, 2,643 A. Rice & Co.
Zinc Ore—
N. Orleans, 381 sks.
Zinc Oxide—
New York, 100 brls.

MANCHESTER.

Week ending April 8th.

Acetate of Lime—
New York, 1,522 bgs.
Acetic Acid—
Antwerp, 8 blns. J. T. Fletcher & Co.
Ammonia—
Rotterdam, 20 cldrs.
Barium Chloride—
Rotterdam, 4 cks.
Barytes—
Antwerp, 150 bgs.
Rotterdam, 17 cks.
Calcium Carbide—
Treport, 165 cs.
Coal Products—
Alizarine
Rotterdam, 12 cks.
Aniline Colours
Rouen, 2 cks.
Aniline Salt
Antwerp, 19 brls.
Rotterdam, 38 cks.
Benzol
Treport, 49 cks.
Colours—
Antwerp, 8 cks.
Rotterdam, { 232 55 cs. 1 bx. 49 brls.
Dyestuffs—
Extract
Rouen, 38 cks.
Logwood
Laguna de Terminos, 320 t.
Shumac
Palermo, 400 bgs.
Tannin
Hamburg, 6 cks. 1 brl.
Rotterdam, 16
Dyewood Extracts—
New York, 10 brls.
Farina—
Stettin, 1,200 bgs. N. W. Jackson
" 300 W. H. Stott & Co.
Glucose—
New York, 200 brls.
Glue—
Rotterdam, 10 bgs. 9 cs.
Rouen, { 41 cks. 20 bgs. 52 bls.
Treport, 102
Glycerine—
Rotterdam, 2 dms.
Indigo—
Rotterdam, 2 chts.
Lead Acetate—
Antwerp, 23 cks.
Ochre—
Treport, 44 cks.
Oxalic Acid—
Rotterdam, 30 cks.
Paraffin Scale—
New York, { 105 brls. 100 cs.
Phosphates—
Ghent, qty.
Potash—
Antwerp, 5 cks.
Rotterdam, 3
Rosin—
New York, 1,000 brls.
Sodium Sulphate—
Hamburg, 1 ck.
Starch—
Antwerp, 380 cs.
New York, 200 bgs.
Tartaric Acid—
Palermo, 16 brls.
Rotterdam. 20 cks.
Wood Pulp—
New York, 172 bls.
Rotterdam, 145 rolls 400 pks.
Zinc Oxide—
Antwerp, 10 cks.
New York, 200 brls.
Zinc White—
Rotterdam, 25 cks.

HULL.

Week ending April 7th.

Acetic Acid—
Rotterdam, 4 cs. Hull & Netherlands S. S. Co.
Acids—
Amsterdam, 1 cs. Hull & Netherlands S. S. Co.
Antimony—
Leghorn, 32 cks. Wilson, Sons, & Co., Ld.
Barytes—
Amsterdam, 172 cks. Hull & Netherlands S. S. Co.
Antwerp, 18 Bailey & Leetham, Ld.
" 85 H. F. Pudsey
Bremen, 38 Sissons Brs. & Co.
" 23
Bleaching Powder—
Antwerp, 25 cks. Wilson, Sons, & Co., Ld.
Bones—
Hamburg, 314 bgs. Wilson, Sons, & Co., Ld.
New York, 123 "
Borax—
Bremen, 20 cks. Reckitt & Sons
Castor Oil—
Leghorn, 3 cs. Wilson, Sons, & Co., Ld.
Chemicals *(otherwise undescribed)*
Antwerp, 68 cks. Wilson, Sons, & Co., Ld.
Boston, 50 brls. "
Danzig, 8 tins "
Ghent, 50 bgs. "
Gothenburg, 10 "
Hamburg, 81 cks. "
Leghorn, 10 "
Stettin, 30 "
Coal Products—
Alizarine
Rotterdam, { 66 pks. 8 cks. 16 brls. Hull & Netherlands S. S. Co.
Aniline
Amsterdam, 3 pks. Hull & Netherlands S. S. Co.
Rotterdam, { 43 bxs. 1 ck. 89 pks. "
Pitch
Copenhagen, 32 brls. Wilson, Sons, & Co., Ld.
Tar
Amsterdam, 2 cks. Hull & Netherlands S. S. Co.
Colours—
Amsterdam, 8 cks. Hull & Netherlands S S Co.
Antwerp, 6 Wilson, Sons, & Co., Ld.
Bremen, 2 Veltmann & Co.
Dunkirk, 2 cs. Wilson, Sons, & Co., Ld.
Hamburg, { 15 cks. 1 cs. 2 pks. 261 brls. "
Marseilles, 11 cks. "
New York, 100 brls.
Rotterdam, 7 cks. "
" 23 pks. Hull & Netherlands S. S. Co.
Stettin, 5 cs. 10 cks. Wilson, Sons, & Co., Ld.
Dyestuffs—
Extract
Dunkirk, 10 cks. Wilson, Sons, & Co., Ld.
Rouen, 25 cks. "
Indigo
Rotterdam, 2 brls. Hull & Netherlands S. S. Co.
Myrabolams
Bombay, 12,853 bgs.
Farina—
Harlingen, 100 bls. Hull & Netherlands S. S. Co.
Glucose—
New York, 122 brls.
Rotterdam, 40 bgs Hull & Netherlands S. S. Co.
Glue—
Hamburg, 100 bgs. Wilson, Sons, & Co., Ld.
" 100 bls.
Rotterdam, 2 cks. Hull & Netherlands S. S. Co
Glue Stock—
Rouen, 64 bls.
Glycerine—
Amsterdam, 1 ck. Hull & Netherlands S. S. Co.
Gutta Percha—
Hamburg, 1 bl. Wilson, Sons, & Co., Ld.
Ochre—
Marseilles, 37 cks.
Rouen, 20 Wilson, Sons, & Co., Ld.
Paint—
Hamburg, 5 cs. Wilson, Sons, & Co., Ld.
Marseilles, 17 "
Paraffin Wax—
New York, 60 brls. Wilson, Sons, & Co., Ld.
" 450
Potash—
Dunkirk, 8 cks. Wilson, 102 dms. Sons, & Co., Ld.
Pyrites—
Huelva, 1,418 t.
Rosin—
Savannah, 1,060 brls.
Saltpetre—
Antwerp, 135 bgs. Wilson, Sons, & Co., Ld.
Hamburg, 34 pks. "
Soap—
Marseilles, 4 cs. Wilson, Sons, & Co., Ld.
" 10 dms.
Naples, 38 cs.
Soda—
Ghent, 150 bgs.
Hamburg, 1 ck. B. & J. Shaw
Sodium Nitrate—
Caleta Buene, 16,341 bgs.
Starch—
Amsterdam, 20 bgs. Hull & Netherlands S. S. Co.
Antwerp, 80 cs.
" 120 Bailey & Leetham, Ld.
Bremen, 1,043 Veltmann & Co.
Dunkirk, 50 bgs. Wilson, Sons, & Co., Ld.
Ghent, 387 cs. "
Stearine—
Rotterdam, 1 cs. Hull & Netherlands S. S. Co.
Sulphuric Acid—
Rotterdam, 3 pks. Hull & Netherlands S. S. Co.
Tallow—
Boston, 815 brls. Wilson, Sons, & Co., Ld.
Dunkirk, 615 cks. "
Tartaric Acid—
Rotterdam, 4 cks. Hull & Netherlands S. S. Co.
Turpentine—
Libau, 51 cks. Helmsing & Son
" 12 Wilson, Sons, & Co., Ld.
Savannah, 3,193 brls.
Ultramarine—
Bremen, 2 cks. H. T. Greaves & Co.
" 8 W. S. Merrikin
Rotterdam, 6 Hull & Netherlands S. S. Co.
Yarnish—
Antwerp, 1 brl.
Waste Salt—
Hamburg, 740 bgs. Bailey & Leetham, Ld.
100 t.
White Lead—
Amsterdam, 98 cks. Hull & Netherlands S. S. Co.
Rotterdam, 42
Wood Pulp—
Christiania, 396 pks. Wilson, Sons, & Co., Ld.
" 82 bls.
Gothenburg, 1,523 bdls. "
Hamburg, 72 bls. "
Hango, 135 "
" 548 J. Good & Sons
" 16 Trent Navigation Co.
Zinc Oxide—
Antwerp, 35 cks. Bailey & Leetham, Ld.

GLASGOW.

Week ending April 13th.

Barium Sulphate—
Antwerp 200 bgs.
Boracic Acid—
Leghorn, 15 cks.
Castor Oil—
Antwerp, 57 cks.
Marseilles, 20 brls. 20 cs.
Chemicals *(otherwise undescribed)*
Rotterdam, 1 ck. 2 cs.
Coal Products—
Alizarine
Rotterdam 8 cks. 27 brls.
Aniline
Rouen, 25 cks. 6 cs.
Colours—
Rotterdam, { 4 cks. 1 cs. 8 bxs. 42 brls.
Hamburg, 8 cks. 1 cs.
Rotterdam, 48 pks. J. Rankine & Son
Cream of Tartar—
Oporto, 3 cks.
Bordeaux, 27
Dextrine—
New York, 40 bgs.
Dyestuffs—
Cutch
Rangoon, 700 bxs. P. Henderson & Co.
Extract
Marseilles, 100 cks.
Bordeaux, 30
Baltimore, 20 brls.
Nantes, 60
Indigo
Rotterdam, 5 cks.
Myrabolams
Bombay, 1,232 bgs.
Shumac
Marseilles, 40 bgs.
Palermo, 1,200
Coal Products *(otherwise undes.)—*
Marseilles, 24 cks.
Dyewood Extract—
Antwerp, 1 ck.
Glucose—
New York, 950 brls.

St. John, N.B., 100
Baltimore, 260

Glue—
Antwerp, 9 cks.

Lead Acetate—
Hamburg, 6 cks.

Lithopone—
Rotterdam, 40 cks. J. Rankine & Son

Magnesia—
Rotterdam 1 ck. J. Rankine & Son

Manganese—
Hamburg, 3 cs.

Manure—
Bombay, 2,132 bgs.

Ochre—
Marseilles, 46 brls.

Painters' Colours—
Antwerp, 5 cks.

Paraffin Scale—
New York, 45 brls. 20 cs.
Rangoon, 240 bxs. P. Henderson & Co.

Phosphates—
Antwerp, 2,000 bgs.

Potash—
Hamburg, 20 cks. 41 dms.

Potassium Prussiate—
Antwerp, 3 cks.

Rosin—
New York, 250 brls.
Baltimore, 301

Sal-ammoniac—
Hamburg, 2 cks.

Salt—
Hamburg, 10 cs.

Saltpetre—
Hamburg, 150 cks.

Soap—
Baltimore, 739 brls.
New York, 134
Genoa, 1 cs.

Soap Lyes—
Marseilles, 120 cks. 35 dms.

Starch—
New York, 550 sks.
Baltimore, 314 bgs.

Stearine—
New York, 8 h hds.

Sulphur—
Catania, 2,670 bgs. 120 brls.

Tallow—
Rotterdam, 60 tcs.
Baltimore, 110

Tannic Acid—
Hamburg, 1 ck.

Tartaric Acid—
Messina, 8 cks.

Varnish—
Antwerp, 8 crts. 2 cs.
New York, 126 brls.

Waste Salt—
Hamburg, 261 cks. 100 t.
Antwerp, 400 bgs.

White Lead—
Hamburg, 28 cks.

Wood Pulp—
New York, 90 bds. Wright, Graham & Co.
Gothenburg, 180 bls.
Christian's'nd, 4,589 W. Grant & Co.
Christiania, 123

Zinc Oxide—
New York, 370 brls.
Hamburg, 100 cks.

Zinc White—
Rotterdam, 5 cks. J. Rankine & Son
" 35

TYNE.

Week ending April 8th.

Antimony—
Hamburg, 1 cs. Tyne S. S. Co.

Barytes—
Antwerp, 250 bgs. Tyne S. S. Co.
Rotterdam, 57 cks. "

Castor Oil—
Antwerp, 56 brls. Tyne S. S. Co.

Colours—
Antwerp, 13 cks. Tyne S. S. Co.
Rotterdam, 1 brl. / 2 cks. "

Glue—
Antwerp, 3 bls. Tyne
1 ck. S. S. Co.
Hamburg, 60 bgs. "

Lithopone—
Hamburg, 20 cks. Tyne S. S. Co.

Manganese Ore—
Hamburg, 150 bgs. Tyne S. S. Co.

Soap—
Rotterdam, 12 cs. Tyne S. S. Co.

Starch—
Antwerp, 40 cs. Tyne S. S. Co.

Stearine—
Antwerp, 19 bgs. Tyne S. S. Co.
Amsterdam, 4 cks. W. Swanston & Sons

Tartaric Acid—
Rotterdam, 2 cks Tyne S. S. Co.

Ultramarine—
Antwerp, 1 cs. Tyne S. S. Co.

Wood Pulp—
Bergen, 40 reels P. H. Matthiessen & Co.
Christiania, 200 bls.
Gothenburg, 136 pks.
Rotterdam, 50 bls. Tyne S. S. Co.

Zinc Oxide—
Antwerp, 35 brls. Tyne S. S. Co

GOOLE.

Week ending April 5th.

Antimony—
Boulogne, 8 cks.

Barytes—
Antwerp, 320 bgs. / 30 cks.

Caoutchouc—
Boulogne, 4 cks.

Coal Products—
Alizarine
Rotterdam, 33 cks.
Aniline
Amsterdam, 15 cks. 1 cs.
Hamburg, 5 1
Rotterdam, 383 62

Colours—
Hamburg, 22 cks. / 18 cs.

Dyestuffs (*otherwise undes.*)—
Boulogne, 48 pks.

Dyestuffs—
Extracts
Rotterdam, 1 ck.

Farina—
Amsterdam, 3,226 bgs.
Delfszyhl, 50
Hamburg, 290

Fustic—
Jamaica, 468 t.

Glue—
Boulogne, 1 ck. 2 bls.
Rotterdam, 10 bgs.

Phosphates—
Ghent, 808 bgs.

Potash—
Calais, 52 dms.
Dunkirk, 10 bgs. 40
Rotterdam, 3 cs.

Pyrites—
Seville, 1,400 t.

Saltpetre—
Antwerp, 85 bgs.
Rotterdam, 100

Ultramarine—
Ghent, 2 cs.
Rotterdam, 20 cks.

Waste Salt—
Hamburg, 508 bgs. / 530 t.

GRIMSBY.

Week ending April 8th.

Caoutchouc—
Hamburg, 7 cs.
Rotterdam, 1

Chemicals (*otherwise undescribed*)
Hamburg, 15 cks.
Rotterdam, 4

Colours—
Antwerp, 2 cks. 1 cs. 51 pks.
Hamburg, 8 1 70
Rotterdam, 2 kgs. / 4 cks.

Dyestuffs (*otherwise undescribed*)
Dieppe, 3 cks.

Dyestuffs—
Extracts
Antwerp, 10 cs.

Salt—
Hamburg, 1,461 bgs.

Starch—
Antwerp, 80 cs.

Varnish—
Antwerp, 2 cs. 2 pks.

EXPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending April 12th.

Acids—
Durban, 10 cs. £20
Auckland, 12 10
Bombay, 12 26

Alkali—
Lyttelton, 3 t. 14 c. £21
Rio de Janeiro, 11 8
Pelotas, 1 10 13

Alum Waste (Concentrated)—
Calcutta, 41 t. 2 c £100

Ammonia—
Durban, 7 cs. £62

Ammonia (Anhydrous)—
Shanghai, 2 cs. £28
Pt. Elizabeth, 6 40

Ammonium Carbonate—
Antwerp, 5 t. 10 c. £130
Stettin, 1 2 27
Paris, 2 18 80
Hamburg, 4 cks. 6 41
Bombay, 6 cs. 13

Ammonium Muriate—
Dusseldorf, 5 t. 1 c. £95
Genoa, 2 40

Ammonium Sulphate—
Martinique, 7 t. £76
Tetgal, 50 537
Samarang, 50 537
Pecalonga, 100 1,085
Madeira, 20 9 c. 230
Cullera, 97 970
Jamaica, 3 10 38
Newport News, 102 5 1,070
Dunkirk, 112 12 1,179
Barbadoes, 150 1,650
Hamburg, 60 630
Ghent, 102 19 1,095

Arsenic—
Durban, 20 dms £19

Borax—
Melbourne, 30 kgs. £26
Adelaide, 1 t. 11 c. 32
Brisbane, 3 16 8
Sydney, 3 16 20 brls. 11
Auckland, 2 80
Christchurch 15 16

Caustic Soda—
Pt. Elizabeth, 1 t. 4 c. £20
Wellington, 15 34
Cape Town, 1 10 28
Hong Kong, 12 6
E. London, 11 10
Melbourne, 12 12

Chemicals (*otherwise undescribed*)
Las Palmas, 18 t. 12 c. £200
Teneriffe, 3 25
Hamburg, 8 cks / 20 kgs. 367
Antwerp, 5 34
Toronto, 18 130
Bremen, 5 cs. 40
Lisbon, 2 27
Bombay, 4 35
Melbourne, 6 68
Shanghai, 4 29
Durban, 15 135
Sydney, 7 72
Maryborough, 25 cks. 3 102
Montreal, 1 20
Paris, 1 24
Dusseldorf, 19 82
E. London, 4 35
Cape Town, 1 10 24 dms. 37
Canterbury, 4 pks. 9
New York, 63 243
Copenhagen, 10 28
Brussels, 7 / 5 kgs. 41
Rotterdam, 5 30
Shanghai, 1 1 / 3 cks. 29
Brisbane, 1 c. 7
Calcutta, 5 kgs. 25
Madras, 21 30
Dunedin, 39 dms. 13
Cape Town, 1 ck. 10 cs. / 7 pks. 24 51
Pt. Elizabeth, 5 87

Chloride of Lime—
Cape Town, 14 c. £10
Pt. Elizabeth, 9 6

Citric Acid—
Colombo, 1 ck. £8
Bombay, 2 c. 16
Cape Town, 1 7
Pt. Elizabeth, 1 6
Durban, 1 cs. 1 10
Melbourne, 10 72
Hiogo, 3 19
Shanghai, 2 15
Hamburg, 10 60
Delagoa Bay, 1 9

Coal Products—
Alizarine
Boston, 42 cks. £466
Aniline
Sydney, 1 cs. £12
Aniline Dye
Valencia, 3 kgs. £16
Sydney, 1 cs. 21
Otago, 2 16
Aniline Oil
Barcelona, 6 brls. £60
Aniline Salt
Barcelona, 10 brls. £60
Benzine
Shanghai, 10 cs. £13
Cape Town, 8 dms. 10
Durban, 1 6
Otago, 24 7
Benzol
Rotterdam, 50 cks. £174
Hamburg, 49 88
Carbolic Acid
San Francisco, 20 cks. £151
Jamaica, 10 dms. 8
Ludwigschafen, 24 09
Rotterdam, 48 204
Hong Kong, 50 20
New York, 5 40
Creosote
Christiania, 125 cks. £125
Dieppe, 200 102,855 galls 581
New York, 300 238
Dyes
Wellington, 1 ck. £17
Naphtha
Dunedin, 5 dms. £6
Durban, 27 9
Naphthaline
Hamburg, 100 bgs. £54
New York, 261 cks. 216
Bordeaux, 7 5
Pitch
Antwerp, 2,838 t. £3,116
Havre, 650 815
Amsterdam, 1,326 1,608
New York, 32 dms. 900
Hochfeld, 205 225
St. Nazaire, 1,102 1,475
Dunkirk, 420 565
Alexandria, 200 cks. 120 brls. 93
Galatz, 50 13
Ibrail, 45 12
Pt. Elizabeth, 20 7
Pyridine Bases
Cologne, 10 dms. £275
Tar
St. John's, Nf'd, 30 cks. £89
Durban, 100 dms. 12

E. London, 100 5
Adelaide, 50 10
Melbourne, 100 24
Trinidad, 30 pks. 26
Seattle, 100 brls. 60
Alexandria, 11 10

Coal Products (*otherwise undes.*)—
Natal, 300 kgs. £26
Brisbane, 14 brls. 18
Sydney, 250 dms. 49

Copper Sulphate—
Oporto, 11 t. 7 c. £230
Pt. Elizabeth, 4 20 fkns 14
Seville, 1 18
Paris, 93 10 2,199
Santander, 5 12 114
Genoa, 12 10 300
Boulogne, 5 3 115

Cream of Tartar—
Pt. Elizabeth, 2 cs. £17
Wellington, 2 t. 8 c. 20 pks. 270
Auckland, 1 10 132
Melbourne, 3 10 269
Fremantle, 10 38
Dunedin, 5 19

Disinfectants—
Shanghai, 10 cks. £19
Madras, 4 cs 8 pks. 22
Penang, 51 dms. 79
Zanzibar, 100 22
Cape Town, 50 15
Otago, 19 46
Jamaica, 122 101
Calcutta, 22 3 500 217
Bombay, 100 89
Sydney, 21 53

Glycerine—
Hamburg, 19 t 12 c. £450
Stockholm, 17 dms. 391
New York, 53 9 1,530

Gypsum—
Sydney, 2 t. 4 c. £10

Manure—
Melbourne, 2 c. £10
Treguier, 75 t. 330
Morlaix, 140 830
Auckland, 40 180
Rouen, 70 6 244
Colombo, 50 210
Madeira, 74 5 400

Nitric Acid—
Foochow, 6 c. £16
Townsville, 10 13
E. London, 10 cs. 18
Channel Is., 28 crbys. 42
Madras, 2 t. 10 75 130

Phosphorus—
Otago, 11 cs. £91
Philadelphia, 5 10

Potassium Bichromate—
Rio de Janeiro, 1 t. 1 c £33

Potassium Chlorate—
Otago, 9 c. £13

Potassium Cyanide—
Melbourne, 4 t. £475
New York, 2 20
Normanton, 10 cs. 130
Rockhampton, 1 115
Townsville, 31 3,692
Delagoa Bay, 7 14 c. 50 1,159
E. London, 3 280

Potassium Prussiate—
Yokohama, 2 t. 5 c. £147

Salammoniac—
Constantinople, 5 t. £145
Bourgas, 15 c. —

Saltpetre—
Martinique, 17 t. 12 c. £216
Santos, 2 3 49
Oporto, 1 17 35
Melbourne, 3 68
Sydney, 4 90
Fremantle, 10 10

Salts of Lime—
Brussels 1 c. £12

Salts of Soda—
Brussels, 3 c. £30

Sheep Dip—
Sydney, 2 t. 9 c. £40
Natal, 1,000 dms. 97
Jamaica, 50 20
Bombay, 1 4 14
Falkland I., 165 175
B. Ayres, 6 11 396
Singapore, 1 11 17
Penang 1 11 17
Cape Town, 20 13
N. Orleans, 11 9 345

Soap—
Pt. Elizabeth, 12 c. £6

Soda—
Rotterdam, 3 t. 9 c. £30

Soda Crystals—
Pt Elizabeth, 5 t. 15 c. £18
Guadeloupe, 4 5

Sodium Bicarbonate—
Algoa Bay, 1 t. £14
Jamaica, 1 7
Hamburg, 10 c. 5
Cape Town, 1 7
Pt. Elizabeth, 1 5 18
Montreal, 6 10
Toronto, 2 5

Sodium Carbonate—
Pt. Elizabeth 10 c. £7

Sodium Prussiate—
Hamburg, 5 t. 2 c. £254
Antwerp, 8 375

Sodium Sulphate—
Ghent, 260 t. £390

Sulphur—
Pt. Elizabeth, 4 t. 9 c. 150kgs. £106
Cape Town, 350 cks. 250 416
Lisbon, 3 t. 14 350 brls. 210

Sulphuric Acid—
Penang, 30 cs. £20
Colombo, 10 18
Durban, 7 16
Boca, 1 15

Superphosphates—
Martinique, 40 t. £142

Tartaric Acid—
Pt. Elizabeth, 1 cs. £11
Melbourne, 5 c. 27
Hiogo, 2 t. 5 250
Wellington, 7 38
Yokohama, 1 11 173
Dunedin, 2 11

LIVERPOOL.

Week ending April 12th.

Acetate of Lime—
Winnipeg, 12 c. 3 q. £7

Acetic Acid—
Lisbon, 5 brls. £38

Alum—
Rangoon, 3 t. 13 c. 3 q. £21
Syra, 8 2 37
Vera Cruz, 1 2 5
Para, 2 3 7
Constantinople, 8 6 3 50
Seville, 4 19
Lisbon, 37 cks. 17 6 3 120
Cartagena, 19 5

Ammonia—
Vera Cruz, 4 c. £5
Vancouver, 13 —

Ammonium Carbonate—
Halifax, 5 c. £7
Melbourne, 5 8
Bordeaux, 1 t. 27
Genoa, 10 13
Montreal, 12 14

Ammonium Muriate—
Melbourne, 1 t. £18

Ammonium Sulphate—
Cullera, 96 t. 5 c. £1,058
New York, 51 5 564
Ghent 50 12 517
Las Palmas, 25 15 286
Gd Canary, 22 246
Valencia, 33 7 360
Teneriffe, 20 279

Amorph. Phosphorus—
Hiogo, 45 cs. £473
Hong Kong, 1 14

Arsenic—
Vera Cruz, 1 t. 4 c. £21
Natal, 1 17

Barium Sulphocyanide—
Turin, 1 t. 10 c. £70

Basic Slag—
Granville, 400 t. £280
Nantes, 235 15 c. 403

Bleaching Powder—
Amsterdam, 47 cks.
Ancona, 25
Antwerp, 29
Baltimore, 67
Barcelona, 6
Boston, 1,313
Calcutta, 100 cs.
Genoa, 347
Ghent, 26
Gothenburg, 37
Halifax, 7
Johnsonburg, 153
Kalamazoo, 20
Leghorn, 15
Lisbon, 167
Oporto, 4
Philadelphia, 244
Piræus, 20
Rotterdam, 11
Rouen, 83
Spring Groves, 77
Venice, 53 dms.
Vera Cruz, 20
Varcelli, 83
Walbech, 70

Bones—
Hamburg, 29 t. 2 c. 3 q. £135

Boracic Acid—
B. Ayres, 1 t. £40

Borate of Lime—
Reval, 20 t. £230

Borax—
Stettin, 2 t. 4 c. 2 q. £71
Valparaiso, 1 5
Vera Cruz, 1 16
Christiania, 2 10 52
Hamburg, 6 3 3 99
St John, N.B., 3 16 62
Tal Tal, 1 41
Palermo, 10 3 8
Copenhagen, 1 14
E. London. 7 191

Calcium Chloride—
B. Ayres, 10 t. 1 c. £23
Gothenburg, 2 13 7
Napier, 11 16 26

Carbolic Acid—
Rotterdam, 4 t. 19 c. £303
Antwerp. 10 210
Amsterdam, 5 13 100
Belize, 1 cs. 5
Hamburg, 7 15 2 q. 473
Copenhagen, 9 3 32
Seville, 9 3 32
Constantinople, 3 2 6
Barcelona, 7 2 6
Oporto, 9 3 32
Montreal, 2 6

Castor Oil—
Punta Gordo, 4 cs.

Caustic Potash—
Chicago, 2 t. 10 c. £68
Sydney, 1 30
Rockhampton, 1 26

Caustic Soda—
Adelaide, 35 dms.
Ancona, 91
Barcelona, 40 110 cks.
Bari, 145
Bilbao, 18
Braila, 100
B. Ayres, 90
Calcutta, 50
Callao, 35
Cape Town, 12 cs.
Cartagena, 35 42 62 pks.
Chicago, 70 bxs. 80
Corfu, 30
Dunedin, 73
Galatz, 312
Genoa, 530
Ghent, 17
Hamburg, 215
Hiogo, 104
Hong Kong, 32
Libau, 18
Lisbon, 20
Malaga, 76
Malta, 11
Melbourne, 45
M. Video, 19
N. Toronto, 40
Novalmoral, 150
Oporto, 15
Para, 21
Pasages, 17 25 cks.
Penang, 8
Philadelphia, 50
Piræus, 235
Rio de Janeiro, 10
Rosario, 200
Roubaix, 17
Rouen, 100
St. John's, Nfd., 10 6
St. Stephen, 100
Sao Paulo, 35
Seville, 295 25 kgs. 25 brls.
Sourabaya, 20
Stettin, 36
Stockholm, 5
Sydney, 70
Talcahuano 30
Tampico, 292
Townsville, 24
Trieste, 33
Valparaiso, 5
Volo, 50

Chemicals (*otherwise undescribed*)
Barcelona, 5 t. £147
Philadelphia, 23 14 c. 605
New York, 15 11 477
Genoa, 10 160
Madras, 20 3 2,000

China Clay—
Barcelona, 130 cks.
Bombay, 84
Boston, 1,258
Cornwall, Ont., 30
Manila, 20
New York, 440 990 bgs.
Philadelphia, 200
Portland, M., 2,095
Pt. Natal, 10
Rio de Janeiro, 32
Trieste, 200

Citric Acid—
Piræus, 2 c. £14

Coal Products—
Alizarine Colour
Lisbon, 1 ck.
Aniline Colour
Barcelona, 16 kgs. 1 cs.
Bombay, 3
Boston, 3 cks. 5 bgs.
Hamburg, 2
Aniline Dyes
Lisbon, 5 cks.
Aniline Oil
Barcelona, 20 brls.
Boston, 10 dms.
Vera Cruz, 3
Aniline Salt
Barcelona, 20 brls.
Boston, 70 cs.
Naphthionate
New York, 6 cks.
Pitch
Rouen, 2 cks.
Tar
Galatz, 20 brls.
Ibrail, 30
Sierra Leone, 20

Copperas—
Halifax, 3 c. £3

Copper Sulphate—
Rio de Janeiro, 3 t. 7 c. 1 q. £56
Rosario, 2 7 2 40
Lisbon, 128 1 236
Varna, 12 2 15
Vigo, 5 5 128
Bari, 103 10 2 1,673
Naples, 9 18 1 175
Cette, 146 11 2,943
Bordeaux, 159 17 3 3,624
Nantes, 46 13 1,026
Genoa 26 19 3 499
Galatz, 3 18 67
Ancona, 51 13 1 935
Leghorn, 59 19 1 1,122
Brindisi, 25 1 432
Piræus, 17 8 1 —
Venice, 47 5 3 999
Santos, 5 9
Patras, 3 13 78
Catacola, 4 3 87
Zante, 6 2 3 —
Malaga, 30 529
Alexandretta, 18 3 20
Tampico, 9 18 2 208
Palermo, 3 51
Oporto, 5 94
Durban 6 3

Disinfectants—
Rangoon, 16 c. 2 q. £146
Calcutta, 12 cks. 29
Cape Town, 1 t. 30

Dried Blood—
Teneriffe, 21 10 c. £20
Dunkirk, 45 15 368
Gd. Canary, 19 69

Magnesia—
Barcelona, 50 cs.
Bordeaux, 25
Genoa, 27 cks.
Leghorn, 2
New York, 10
Paris, 20
Puerto Cabello, 1
Tampico. 1
Vera Cruz, 2

Magnesium Carbonate—
Rio de Janeiro, 2 c. £21

Manure—
Gd. Canary, 10 t. £31
Genoa, 5 25
St. John's, N'fd., 2 t. 5 c. 11
Hamburg, 40 160
Valencia, 5 4 44

Nitric Acid—
Tal Tal, 3 c. 3 q. £11

Oxide—
Portland, M., 9 c 1 q. £10

Paint—
Arecibo, 200 kgs.
Belize, 146
Callao, 10 c.
Cardenas, 13 cks.

Cienfuegos, 3
Colombo, 40 dms.
Gibraltar, 5 cks.
Hamburg, 36 pks.
Havana, 3 cks.
Hong Kong, 80 dms.
Kingston, Ja., 250
Lagos, 360
Leghorn, 2 cks.
Limon, 70
Madras, 2
M. Video, 40 cs. 5
Old Calabar, { 2
6 dms.
Opobo, 10
Para, 137
Ponce, 1 ck.
Pt. Novo, 2 cks.
Pt. Said, 20
Punta Arenas, 20 dms.
R. Javary, 2 cs.
Salaverry, 80 1 1 ck.
St. John's, Nfd., 298 17
San Juan, 140 7
Savanilla, 9
Sierra Leone, 210
Talcahuano, 42
Valparaiso, { 151 5
20 10

Painters' Colours—
Bahia, 26 kgs. 5 cs. 52 brls.
B. Ayres, 80 20 cks.
Hamburg, 12 2 pcs. 32 dms.
Nassau, 2 cks.
New York, 2
Para, 122 11 tcs. 15 brls.
Piræus, 2 cs. 85
Ponce, 146 pks.
Santiago de C., 74 1
Talcahuano, 35 cks.
Vallallodid, 15

Paraffin Wax—
Constantinople, 5 bgs.
Genoa, 40 5 cs.
Leghorn, 50
Vera Cruz, 60

Phosphorus—
Hiogo, 10 cs. £75
Shanghai, 14 105

Picric Acid—
Baltimore, 13 t. £1,100

Potash—
Para, 4 c. 2 q. £5

Potassium Bicarbonate—
Hong Kong, 3 c. 1 q. £6

Potassium Bichromate—
Constantinople, 5 t. 1 c. £141
Lisbon, 7 8
Santos, 5 14
Vera Cruz, 3 7 99

Potassium Bromide—
Santos, 2 c. £7

Potassium Carbonate—
Chicago, 2 t. 3 c. £51
Santos, 5 6
Vancouver, 1 1 q. —

Potassium Chlorate—
Copenhagen, 1 t. 10 c. £45
Gothenburg, 10 300
Hamburg, 5 8
Havana, 1 30
Konigsberg, 1 32
Libau, 3 93
Odessa, 2 62
Porto Alegre, 5 150
Santos, 5 8
St. John, N.B., 4 6
Sydney, 5 150
Vera Cruz, 2 61

Potassium Stannate—
Bombay, 1 t. 1 c. 1 q. £57

Salammoniac—
Alexandria, 6 t. £99
Cape Town, 12 c. 21
Genoa, 16 24

Salt—
Akassa, 488 t. 5 c.
Amsterdam, 300
Antwerp, 320
Baltimore, 630
Benty, 1,600 bgs.
Benin, 125 t. 6
Bloomfield, 192 sks.
Boston, 150
B. Ayres, 100 45 brls.
Buguma, 500 bgs.
Calcutta, 3,456 t.
Cameroons, 20 4 c.
C. C. Castle, 91 5
Carleton, 320
Cienfuegos, 50
Conakry, 56 2
Degama, 74
Dubreka, 524 8
Egwanga, 20
Ghent, 160
Gd. Lahou, 16 14
Havana, 150
Manaos, 14 4
Matanzas, 100
Melbourne, 55
New York, 30
Old Calabar, 99 18
Para, 31 5
Philadelphia, 20
Petitcodiac, 16
Point de Chere, 16
Porto Rico, 50
Punta Arenas, 30
Rangoon, 426
Reval, 29 14
Rotterdam, 160
Rouen, 103 bgs.
Santos, 200 cs.
Santiago de Cuba, 20 t.
Stockholm, 10
Sussex, 384
Toronto, 10 10 c.
Valparaiso, 3 2
Warri, 100 bgs.

Saltpetre—
Halifax, 5 c. £5

Sheep Dip—
Belize, 3 c. £5
Brisbane, 300 dms. 200
B. Ayres, { 1,000 823
25 t. 7
Calcutta, 200 dms. 25
Guelph, 2 19
Melbourne, { 199 kgs. 500
650 dms.
Montreal, 8 3 q. 8

Soap—
Accra, 700 bxs.
Addah, 51
Adjuah, 50
Algoa Bay, 1,190 cs. 25 bdls.
Amsterdam, 210
Anamaboe, 100
Antofagasta, 3
Antwerp, 100
Axim, 151
Bakana, 250
Batavia, 3,800
Belize, 350 3
Benty, 150
Bombay, 637 1
Boston, 10 brls.
B. Ayres, 67 cs.
Buguma, 860
Burutu, 25
Calcutta, 9
Cameroons, 100
C. C. Castle, 975
Cape Palmas, 40
Cape Town, 2,700 12
Christiania, 100
Colombo, 6
Dakar, 30
Degama, 550
Delagoa Bay, 905 30 4
Durban, 200 25
Dubreka, 50
E. London, 3,185
Gibraltar, 400
Hamburg, 11
Hobart, 560
Hong Kong, 500
Johan'esburg, 1,700 60 18
Karachi, 35
Kingston, Ja., 1,000 70
Kotonou, 25
Ladysmith, 6
Lagos, 1,221 pks.
Las Palmas, 112
Launceston, 560
Lanzarote, 10
Lisbon, 10
Lome, 50
Lydenburg, 25
Malta, 32
Manaos, 650
Mangalore, 2
Melilla, 200
Menado, 250
M. Video, 1
Mossel Bay, 100
New York, { 4 brls.
37 cs. 130 dms.
Old Calabar, 2,112
Opobo, 60
Para, 302 100 bdls.
Penang, 10
Philadelphia, 1
Pt. Natal, 60
Pretoria, 20
Puerto Cortez, 100
Punta Gonda, 550
Rio de Janeiro, 5
Rio Javary, 100
Rosario, 1
Rotterdam, 120
Rouen, 42 brls.
Salt Pond, 630
St. John's, 340
St Thomas, 1 cs.
San Juan, 60
Santos, 1
Sapeli 600
Shanghai, 16,582
Sierra Leone, 500
Singapore, 201 50
Smyrna, 36
Surinnam, 135
Tangiers, 31
Toronto, 1,802
Trieste, 2
Trinidad, 1,000
Valparaiso, { 25 kgs. 28 3 bdls.
12 brls.
Warri, 400 bxs.

Soda—
Gothenburg, 350 bgs. 50 cks.
Para, 2
Santos, 1
Shanghai, 100 kgs.

Soda Ash—
Baltimore, 800 bgs.
Boston, 28 tcs. 28 cks.
B. Ayres, 64
Hespeler, 107
Hiogo, 396 sks.
Konigsberg, 50
Leghorn, 120
Libau, 200
Lyttelton, 20 cks.
New York, 2,400 14
Philadelphia, 800
Piræus, 50 brls.
St. Stephen, 120
San Sebastian, 24
Shanghai, 21
Sourabaya, 50
Talcahuano, 10
Toronto, 200
Trieste, 100
Valparaiso, 25
Venice, 100 100
Yokohama, 30

Soda Crystals—
Boston, 280 cks.
Calcutta, 25 kgs. 25 brls.
Constantinople, 160
Malta, 50 15
New York, 140 cks.
St. John, N.B., 50
St. John's, N'fd., 80

Sodium Bicarbonate—
Amsterdam, 100 kgs.
Barcelona, 60 4 cks.
Bombay, 200
Braila, 40
Brisbane, 75
Cairo, 50
Cape Town, 20
Christchurch, 40
Dar el Salaam, 10
Dunedin, 140
Galatz, 301 17 brls.
Halifax, 125
Hiogo, 400
Johannesburg, 60
Karachi, 525
Leghorn, 5
Lisbon, 80
Montreal, 2
Para, 10
Patras, 50
Pt. Natal, 40
Pretoria, 10
Rangoon, 50 15 bgs.
Rotterdam, 10
Rouen, 90 dms 2
St. John, N.B., 1,000 100
St. John's, N'fd., 20
San Fernando, 20
Santander, 66
Santos, 31
Sao Paulo, 50
Singapore, 11
Taltal, 20 cs.
Teneriffe, 10 bgs.
Timaru, 65
Valparaiso, 4
Wellington, 435 30
Yokohama, 250

Sodium Bisulphide—
Santos, 2 c. 2 q. £6

Sodium Chlorate—
Boston, 150 kgs.
Lisbon, 1 ck.

Sodium Hyposulphite—
Baltimore, 60 kgs.

Sodium Prussiate—
Providence, 25 cks.

Starch—
Bremen, 30 bgs.
Lisbon, 2 cks.
Nantes, 4 hds.
St. John, 40 cs.

Sulphur—
Boston, 150 t. 6 c. £640
Natal, 2 2 11
New York, 1 19
Pt. Adelaide, 10 43
Portland, Me., 75 3 320

Sulphuric Acid—
Hong Kong, 1 t. 1 c. £12
Pernambuco, 11 8

Superphosphates—
Barcelona, 200 t. £550
Cartagena, 9 16 c. 28
Cullera, 408 3 974
Gd. Canary, 23 72
Teneriffe, 15 49
Stettin, 1,101 2,530
Valencia, 649 17 1,606

Tartaric Acid—
Vera Cruz, 1 c. £6

Tin Crystals—
Portland, Me., 2 t. 4 c. £133

Yarnish—
Bilbao, 6 cks.
Gijon, 2
Hamburg, 2 tins
Kobe, 3 cs.
M. Video, 9
New York, 4 cks. 1 jar
Pt. Novo, 1 dm.
Seville, 1
Shanghai, 50
Valparaiso, 30

Venetian Red—
Boston, 140 bgs.
Bremen, 300
Chicago, 110 brls.
Danzig, 200
Dayton, 100
Galatz, 70 kgs.
Ghent, 13 cks.
Hamburg, 100 bgs.
Leghorn, 24 cks.
Libau, 20
Lisbon, 27
Milwaukee, 100
Newport News, 110
New York, 11 252
Oporto, 198
Rotterdam, 9 100 bgs.
Stettin, { 109 kgs.
12 cks.

Verdigris—
Yokohama, 5 c. £12

White Lead
Calcutta, 80 kgs.
Delagoa Bay, 1 ck.
St. John's, 215 kgs.
Tangiers, 20
Valparaiso, 30

Zinc Oxide—
Patras, 6 c. £9

MANCHESTER.

Week ending April 12th.

Ammonium Sulphate—
Valencia, 1,773 bgs.

Caustic Soda—
Rio G. do Sul, 100 dms.

Chemicals (*otherwise undescribed*)
Fredericton, 51 cks.
St. John, N.B., 36 brls.

Coal Products—
Aniline Colours
Belgium, 1 kg. 1 cs.
Germany, 3
Aniline Oil
Belgium, 2 dms.
France, 5
Germany, { 6 tins 8
11 brls.
Aniline Salt
Germany. 1 ck.
Carbolic Acid
Germany. 50 cks.
Pitch
Belgium, 193 t. 11 c.
Cette, 772
Marseilles, 1,347
Toluol
Germany, 40 dms.

Colours—
Belgium. 8 cks.
Germany, 4 2 cs.

Dextrine—
Barcelona, 25 bgs.
Dyestuffs *(otherwise undescribed)*
Bushire, 2 cs.
Sultanabad, 4
Dyestuffs—
Indigo
France, 6 chts.
Farina—
Holland, 100 sks.
Glue—
Barcelona, 24 cks.
Belgium, 10
Germany, 20
Naphthylamine—
Germany, 1 ck.
Salt—
Carleton, 183 t.
Sweden, 101 10 c.
Soap—
Barcelona, 6 cks.
Soda Crystals—
St. John, N.B., 90 kgs.
Sodium Bicarbonate—
St. John, N.B., 7,350 kgs.
Sodium Naphthionate—
France, 24 bgs.
Germany, 29 cks.
Tallow—
Bombay, 10 brls.
Germany, 20 cks.

HULL.

Week ending April 8th.

Ammonium Sulphate—
Antwerp, 92 bgs.
Bombay, 46
Dunkirk, 835
Rotterdam, 500
Antimony—
New York, 150 cks.
Basic Slag—
Stettin, 3,060 bgs.
Caustic Soda—
Danzig, 35 dms.
Chemicals *(otherwise undescribed)*
Amsterdam, 48 cks.
Antwerp, 2 pks.
Bombay, 10 500
Boston, 292
Christiania, 5 52 cs. 5 899 slbs.
Constantinople, 50
Drontheim, 4
Ghent, 4
Gothenburg, 42 10 pks.
Hamburg, 13 110
Kurrachee, 263
Odessa, 100
Rotterdam, 39 156
Stettin, 67 bgs. 5 10 btls.
Coal Products—
Creosote
Hamburg, 19 cks.
Pitch
Antwerp, 235 t.
Dunkirk, 220
Tar
Amsterdam, 41 cks.
Antwerp, 30
Christiania, 21
Dunkirk, 47 brls.
Gothenburg, 5
Hamburg, 21
Rotterdam, 10
Stettin, 13
Cottonseed Oil—
Amsterdam, 30 t. 1 c.
Antwerp, 20 4
Bremen, 20 1
Dunkirk, 51 15
Ghent, 4 18
Gothenburg, 5
Hamburg, 5 6
Rotterdam, 29 15
Rouen, 3 13
Dyestuffs *(otherwise undescribed)*
Boston, 7 cks.
Drontheim, 2
Dunkirk, 70 bgs.
Glue—
Drontheim, 5 bgs.
Hamburg, 10 5 bls.
New York, 53 cks.
Linseed Oil—
Antwerp, 4 t. 5 c.
Bombay, 9 11
Boston, 2 3
Christiania, 6 13
Christiansand, 1 15
Drontheim, 3 1
Hamburg, 1 15
Rotterdam, 7 12
Stavanger, 2 3
Paint—
Bombay, 576 kgs.
Painters' Colours—
Antwerp, 32 cks. 5 dms. 131 cs. 1 pk.
Boston, 100
Christiania, 1 2
Christiansand, 1 116
Christiansund, 16 dms. 100 pks.
Danzig, 35
Drontheim, 16
Dunkirk, 7
Ghent, 6 79 dms.
Gothenburg, 10 1 pk.
Hamburg, 2
Harlingen, 2
New York, 216 141
Reval, 1
Riga, 1
Rotterdam, 11 4 dms.
Rouen, 7
Stettin, 84 5
Soap—
Bombay, 2 cs.
Christiania, 17
Constantinople, 2
Corinto, 14
Drontheim, 70
Ghent, 4
Tallow—
Amsterdam, 12 cks.
Varnish—
Antwerp, 21 cks. 2 cs.
Bergen, 1
Christiania, 1
Ghent, 5
Stettin, 5 2
Waste Salt—
Amsterdam, 20 brls.

GLASGOW.

Week ending April 13th.

Ammonium Sulphate—
Berbice, 24 t.
Demerara, 299 19 c. 1 q.
Genoa, 10 2
Palermo, 30 10 3
Rotterdam, 50 12 1
Sicily, 15 4
Trinidad, 49 5 1
Chemicals *(otherwise undescribed)*
Rotterdam, £23
Trinidad, 39 10s.
Chloride of Lime—
Natal, £20
Coal Products—
Carbolic Acid
Rotterdam, £297
Naphthaline
Antwerp, £50
Pitch
Bombay, 4 t.
Genoa, £1,369
Hamburg, 264 18 c.
Havre, 275
Montreal, 20
Tar
Bombay, £25 10s.
Karachi, 114 10
St. John's, N'fd., 24
Colours—
Christiania, £16 16s.
Copperas—
Bombay, £50
Dextrine—
Italy, £39
New York, 21
Dyestuffs *(otherwise undescribed)*
Canada, £55
Farina—
Bombay, £58
Gutta Percha—
Rotterdam, £10
Iodine—
Rotterdam, £230
Lime Acetate—
Bombay, 5 t. 6 c. 3 q.
Linseed Oil—
Demerara 13 t. 3 c.
Pt. of Spain 7 3 q.
Litharge—
Bombay 2 t. 4 c. 1 q.
Magnesium Sulphate—
Bombay, £20
Christiania, 10 L.
Manure—
Barbadoes, 101 t. 15 c. 2 q.
U.S.A., 1 1
Paint—
Bombay, £332 10s.
Christiania, 18 1
Painters' Colours—
Adelaide, £30 13s.
Boston, 20
Brisbane, 193 10
Durban, 104 17
Mauritius, 60 6
Melbourne, 30
M. Video, 42
New Glasgow, 43
Pt. of Spain, 42
St. John's, N'fd., 33
Paraffin Wax—
Genoa, £35
Italy, 1,791
Leghorn, 64
Riga, 390
Rotterdam, 40
Sicily, 38
Potassium Bicarbonate—
Christiania, £23
Rotterdam, 56
Potassium Bichromate—
Bombay, 5 t. 8 c.
Potassium Cyanide—
Delagoa Bay, £610
Melbourne, 760
Sydney, 300
Valparaiso, 230
Red Lead—
Rotterdam, £90
Rosin—
Bombay, 2 t. 14 c. 1 q
Sheep Dip—
B. Ayres, £45
Soap—
Algoa Bay, 5 t. 19 c. 2 q.
E. London, 5 12
Natal, 2 1
Trinidad, 5
Winbury, O.F.S., 1 3
Soda Crystals—
Tampico, 9 t. 3 c. 2 q.
Starch—
Rotterdam, £40
Tallow—
Rotterdam, 13 t.
Transvaal, 1
Varnish—
Adelaide, £22 13s.
Bombay, 40
Vitriol—
Karachi, £1,150
White Lead—
Algoa Bay, £32
Natal, 103 9s.
Transvaal, 47 13

TYNE.

Week ending April 8th.

Alkali—
Amsterdam, 29 t. 11 c.
Hamburg, 5 17
Rotterdam, 1 15 2 q.
Aluminous Cake—
Copenhagen, 40 t. 4 c. 3 q.
Barium Binoxide—
Antwerp, 10 t. 10 c. 1 q.
Hamburg, 10 13 2
Barytes—
Antwerp, 2 t.
Bleaching Powder—
Antwerp, 63 t. 6 c. 3 q.
Bergen, 5 2
Copenhagen, 9 19 2
Drontheim, 10 3
Gothenburg, 65 5 1
Hamburg, 37 6 1
Rotterdam, 27 15 1
Caustic Soda—
Aalborg, 4 t. 7 c.
Amsterdam, 1 16
Antwerp, 41 4 1 q.
Barcelona, 64 15 1
Christiania, 9 14
Gothenburg, 14 16
Coal Products—
Pitch
Rouen, 20 t.
Colours—
Sebastopol, 4 c. 3 q.
Stavanger, 1 2
Litharge—
Amsterdam, 1 t. 4 c.
Christiania, 10 1 q.
Gothenburg, 1 13 3
Hamburg, 10 6 1
Novorossisk, 1 1 3
Rotterdam, 18
Magnesia—
Antwerp, 1 t. 12 c.
Constantinople, 18 3 q.
Hamburg, 14 3
Rotterdam, 1 2
Manganese—
Antwerp, 2 c. 2 q.
Paint—
Antwerp, 2 c.
Bergen, 1 2 q.
Copenhagen, 6 t. 13
Gothenburg, 15
Hamburg, 1 6
Red Lead—
Amsterdam, 13 t. 9 c. 2 q.
Christiania, 2 15 2
Constantinople, 5
Copenhagen, 1 1 2
Gothenburg, 17 11 3
Hamburg, 17 5
Odessa, 37 4
Rotterdam, 5 2
Stavanger, 4 11 2
Salammoniac—
Gothenburg, 1 t. 1 c. 2 q.
Soda—
Christiania, 8 t. 14 c. 1 q.
Rotterdam. 5 3
Soda Ash—
Gothenburg, 50 t. 1 c.
Sodium Sulphate—
Gothenburg, 281 t.
Sulphur—
Antwerp, 10 t.
White Lead—
Stavanger, 1 t. 18 c.

GOOLE.

Week ending April 5th.

Caoutchouc—
Boulogne, 8 cks.
Chemicals *(otherwise undescribed)*
Antwerp, 1 dm.
Hamburg, 13 crbys.
Coal Products *(otherwise undes.)—*
Amsterdam, 144 cks.
Antwerp, 1 1 cs.
Boulogne, 1 1 1 dm.
Rotterdam, 192
Coal Products—
Pitch
Antwerp, 731 t.
Boulogne, 15 cks.
Dunkirk, 341 t.
Dyestuffs *(otherwise undescribed)*
Hamburg, 60 bgs.
Manure—
Hamburg, 500 bgs.
Rotterdam, 100
Painters' Colours—
Antwerp, 1 ck. 1 cs.
Ghent, 1
Hamburg, 1 1 5 dms.
Rotterdam, 4

GRIMSBY.

Week ending April 8th.

Alkali—
Port au Prince, 357 dms.
Caoutchouc—
Esbjerg, 2 bgs. 1 cs.
Gothenburg, 2 cks.
Helsingborg, 11 bs.
Chemicals *(otherwise undescribed)*
Dieppe. 12 cs.
Coal Products *(otherwise undes.)—*
Dieppe, 1 kg. 30 cks. 2 cs.
Hamburg, 15 btls. 34 pks.
Painters' Colours—
Antwerp, 1 cs.
Hamburg, 2 pks.
Rotterdam, 4 cks. 2 kgs.
Sulphur—
Malmo, 385 bgs.

PRICES CURRENT.

WEDNESDAY, April 19, 1899.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9	&	8/3
,, Glacial .. .. ,,			35/-
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	9
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	0	11½
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	0
Arsenic, white powdered .. .. nett per ton	18	10	0
Alum, loose lump .. .. ,,	4	5	0
Alumina Sulphate (pure) .. .. ,,	3	15	0
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¼ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2¾
,, = 24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	19	0	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	10	18	9
,, ,, (grey) Hull .. .. ,,	10	16	3
Aniline Oil (pure) .. .. per lb.	0	0	4½
Aniline Salt ,, ... ,,	0	0	4
Antimony .. .. per ton	39	0	0
,, (tartar emetic) .. .. per lb.	0	0	7½
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	4	5	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	5	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6¼
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	7½
,, 50/90 ,, ... ,,	0	0	8
Carbolic Acid (crude 60°) .. .. ,,	0	1	11½
,, (crystallised 40°) .. .. per lb.	0	0	6¾
,, (liquid 95/97%) .. .. per gallon	0	1	0
Creosote (ordinary) .. .. ,,	0	0	3½
,, (filtered for Lucigen light) .. .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	3	0	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	3	0
Solvent Naphtha, 90% at 160° .. .. per gallon	0	1	0
Copper .. .. per ton	76	0	0
,, Sulphate .. .. ,,	25	0	0
,, Oxide (copper scales) .. .. ,,	56	0	0
Glycerine (crude) 80% .. .. ,,	24	10	0
,, (distilled S.G. 1250°) .. .. ,,	48	10	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	2	6
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	15	2	6
,, Litharge Flake (ex ship) .. .. ,,	16	0	0
,, Acetate (white ,,) .. .. ,,	24	10	0
,, ,, (brown ,,) .. .. ,,	18	10	0
,, Carbonate (white lead) pure .. .. .. ,,	18	10	0
,, Nitrate .. .. ,,	22	10	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	4	17	6
,, ,, (grey) (ex ship) .. .. ,,	7	17	6
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton	9	10	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	14	15	0
,, Borate .. .. per cwt.	2	0	0
,, Ore, 70% .. .. per ton	3	10	0
Methylated Spirit, 61° O.P .. .. per gallon	0	2	0
Naphtha (Wood), Solvent .. .. ,,	0	3	0
,, ,, Miscible, 60° O.P. .. .. ,,	0	3	10
Oils:—			
Cotton-seed .. .. per ton	17	15	0
Linseed .. .. ,,	19	10	0
Stearine .. .. ,,	26	0	0
Phosphorus (Yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	10	0
,, Chlorate .. .. per lb.	0	0	3½
,, Cyanide, 98 % .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) 90 % .. .. per ton	22	0	0
,, ,, ,, 75/80 % .. ,,	17	15	0
,, Potash Hydrate Liquid 50 % .. .. ,,	11	0	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	2	12	6
,, Prussiate Yellow .. .. per lb.	0	0	7½
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	0
,, Muriate, 80 % ,, ... ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3⅜
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % .. nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	5	0
,, ,, (Carb. Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Soda Crystals) .. .. .. ,, ,, (f.o.r. w'ks.)	2	10	0
,, Acetate (ex-ship) .. .. ,,	12	15	0
,, Arseniate, 45 % .. .. ,,	13	10	0
,, Chlorate .. .. per lb.	0	0	3¾
,, Borate (Borax) .. .. nett per ton	15	15	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton (10 ton lots)	7	12	6
,, ,, (74 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	0	0
,, ,, (60 % Caustic Soda) .. ,, ,, (10 ton lots)	6	0	0
,, ,, (pure liquor 90° Tw.) .. ,, ,, (10 ton lots)	3	10	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate (cwt. kegs) .. .. ,,	6	15	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25 % .. .. ,,	15	10	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	8	3
,, Nitrite, 98 % .. .. per ton	26	0	0
,, Phosphate .. .. ,,	10	7	6
,, Prussiate .. .. per lb.	0	0	6
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	10	0
,, Stannate, 40 % .. .. per cwt.	3	10	0
,, Sulphate (Salt-cake) .. .. per ton	1	9	0
,, ,, (Glauber's Salts) .. .. .. ,,	1	15	0
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	4	15	0
Strontium Hydrate, 100 % .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. .. per lb.	0	0	5¾
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton	7	0	0
,, (Roll Brimstone) .. .. ,,	6	0	0
,, Brimstone: Best quality .. .. ,,	4	12	6
Superphosphate of Lime (26 %) .. .. ,,	2	10	0
Tallow .. .. ,,	24	0	0
Tin Crystals .. .. per lb.	0	0	7½
,, English Ingots .. .. per ton	118	0	0
Zinc (Spelter) .. .. ,,	27	17	6
,, Chloride (solution, 100° Tw.) .. .. .. ,,	7	10	0
,, Sulphate, Crystal .. .. ,,	7	15	0

THE

CHEMICAL TRADE JOURNAL

AND

OIL, PAINT and COLOUR REVIEW.

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LATE ADVERTISEMENTS.

FILTER PRESS and Hydro-Extractor Wanted.—State price and full particulars.—Address, "Filter," *Chemical Trade Journal* Office, Manchester.

FOR DISPOSAL—a number of Pyrites Burner Fronts, equal to new. Offers to "Disposal," *Chemical Trade Journal* Office, Manchester.

TO Sulphuric Acid Manufacturers: One high-pressure Steam Engine, with air pumps complete, steam cylinder 7 in. diameter, 12 in. stroke, two air cylinders, 11 in. diameter, 11 in. stroke. £35. One wrought iron lead-lined egg compressor vessel, 7 ft. diameter, 7 ft. long, £50. Two wooden lead-lined covered store acid tanks, about 10 ft. by 6 ft. by 5 ft., with manhole lids and branch pipes, £16. each.—Apply, McDougall Bros., Millwall Docks, London, E.

TO Mine Owners: Wanted, by large Metal Extraction and Chemical Works, regular supplies of Pyrites or Ores, containing Sulphur, Copper, Zinc, or other metals. Address, in first instance, to "Box 36," *Chemical Trade Journal* Office, Manchester.

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WHAT ARE THE PROSPECTS OF A NITRATE COMBINE?

THE long-talked of combination of nitrate producers still seems to hang fire, a fact which may seem strange when the chemical composition and properties of the article itself are considered, but which is by no means surprising when looked at from a business point of view.

This week, there having been held the annual meetings of two dividend-paying nitrate companies—there are two left at least—we have been able to learn from the utterances of the chairmen how the land lies. From what they have been kind enough to acquaint us with, it is evident that the task of consummating a combine is as difficult to-day as it was two years ago.

Furthermore, the position of affairs and opinions, as summarised by Messrs. Morrison and Harvey, show that the deadlock which exists is likely to obtain indefinitely, or at all events until those companies who have adopted a mulish policy are either willing to fall in line, or fall to pieces. Seeing, however, that the stubborn companies are some of the healthiest, there is little prospect of the latter solution of the difficulty resulting. Of course there are dividend-paying concerns that would be willing to accept the quota of production allotted by the Investigation Committee, but in the matter of a Combine it is not a case of securing a mere majority, but a unanimous and complete amalgamation of interests.

Everything depends upon the definition of "equitable terms." Those who have reduced their output to a figure which approximates to the quota allotted them under the Combine, think the terms of the Committee are equitable; but many of the oficinas have larger marquinas than their output would justify, and to many of such companies the results the committee arrived at are not palatable. It is easy to understand those who are in a bad position objecting, as it is not very pleasant to have one's poverty paraded. These concerns naturally think the terms are not equitable.

Then, again, there are flourishing concerns who are quite desirous of seeing a combination if it can be arranged on "equitable terms," but when their productive capacity is estimated by the Committee at considerably less than they have actually made in the preceding twelve months, while other oficinas which have not been able to make a quintal of nitrate during the past year are put down for quotas almost as large as their own, they think it is time to protest.

Even the appointment of a kind of Appeal Committee, whose object was to investigate and adjust these complaints about quotas, has failed to satisy the dissentients, and although the latter appear to hope that wiser counsels may prevail and the Combine be accomplished, it is hard to see how it can possibly come about when such widely divergent ideas of what are "equitable terms," and "wiser counsels" prevail.

It is a very ill wind, however, that blows no good, because

it is estimated that owing to the absence of the Combine, one million sterling per annum is being lost. It cannot be lost through a reduced consumption, as the consumption keeps increasing; so, presumably, it is lost because this sum cannot be squeezed out of the British and foreign farmers, by the aid of curtailed production and enhanced prices. Except from the view point of shareholders in shaky nitrate companies, it would seem a good thing for the majority that the path of the Combination promoter is so thorny, and beset with obstacles.

Reports of Companies.

BROXBURN OIL CO., LTD.

The directors announce dividends for the year ended March 31 of 6 per cent. on the preference shares and 8½ per cent. on the ordinary shares, leaving £1,665. to be carried over, after writing off £12,610. for depreciation, £6,000. to renewal account, and £1,000. to accident and insurance fund.

SALAR DEL CARMEN NITRATE SYNDICATE, LTD.

The second annual general meeting of the members of this Company was held on Wednesday, at Winchester House, Old Broad-street, E.C., Mr. W. T. Morrison (chairman of the company) presiding.

The Chairman said he thought they were fully entitled to make the statement that the report and accounts were satisfactory, especially considering the very low price at which nitrate had ruled during the last twelve months. Their gross profit for the year had amounted to £32,008. The London expenses were £2,373., debenture interest, £4,752., and difference on exchange, £4,526. The loss on exchange, he might say, was more or less a matter of account. The debentures to be redeemed for this half year amounted to £4,500, costing them £4,696. Preliminary expenses had been paid off to the amount of £2,093., reducing the amount to £4,400. Of the cost of the debenture issue they proposed to write off the sum of £931., reducing that amount to £6,000. They then proposed to pay a dividend of 6 per cent., which would require £6,570., leaving £6,037. to be carried forward to provide for the redemption of £4,500. more of debentures, and leaving a balance of upwards of £1,000. The debenture issue up to June 30 next would be reduced to £71,000., and the debenture interest would be reduced during the next year by £540. There was an obligation on their part to redeem these debentures by £9,000. annually until extinguished, so that in about eight years the whole of the debenture debt would be extinguished, thus releasing for the ordinary shareholders an amount of £14,850. Possibly after 1902 this redemption might be accelerated. The stocks of unsold nitrate, caliche, and iodine, at cost, represented £10,976. The iodine alone, at the present price, represented a far larger sum. Of course, the sale of iodine, as they probably knew, was governed by combination, and naturally that amount could not be realised all at once; but they would get a substantial amount for it from that source. In fact, they would derive from iodine this year probably more than double the amount brought into the accounts of this year. No doubt they had looked at the accounts, and seen the aggregate of their liabilities — namely, £43,000.—but he reckoned their liquid assets were £68,379, showing about £25,000. of working capital. This was the first full twelve months that their maquina had been at work, and he might say it had worked practically without a hitch, which reflected the very highest credit upon the gentlemen who designed the machinery, Messrs. Strain & Robertson, and on the manager, Mr. Ritchie, who superintended its erection. With regard to the cost of production, he might say it was quite up to the standard as stated in the original prospectus of the company. Unfortunately the price of nitrate had not been so good, otherwise their profits would have been larger. Still, their production was equal to that of any other oficina when fully employed, but naturally it depended upon the amount of their production. During last year, when nitrate was extremely low, and when there was a probability of a combination, they carefully took into consideration the question of production, and they thought it was good policy to reduce the production more or less to that which would be given to them by a combination. The best proof that their estimate of that production was correct was seen when he said that in the recent attempts to make a combination, it was conceded that the quantity which they turned out would be more or less the quantity assigned to them. They could understand that in reducing their production to one-half this would have the effect of making the cost much greater, inasmuch as the fixed charges remained the same as would be the case were they working at full *power.*

MASON AND BARRY, LTD.

The directors, in their report for 1898, state that the total quantity of ore broken and raised at the mine during the year 1898 was 169,775 tons, as against 177,549 tons in 1897; and the shipments during the same period (inclusive of ore from the cementation works) amounted to 285,441 tons, as against 267,290 tons in the previous year. The quantity of ore sold and invoiced for its sulphur value during 1898 amounted to 284,880 tons, as against 272,498 tons in 1897. The average price of gold mining copper, including Chili bars, during 1898 was £51. 16s. 6d., as against £49. 2s. 6d. in 1897 and £46. 18s in 1896. After writing off in the mine books for depreciation of works, plant, &c., the sum of £36,823., and allowing for the variation in the estimated value of the stocks on hand in this country, on the Continent, and in Portugal, on December 31, 1898, and, after deducting management expenses and income-tax, the net profits on working account have amounted to the sum of £37,850., to which has to be added the sum of £8,202., received as dividend on La Sabina shares, and the sum of £6,513 from sundries, making together a total profit for the year of £52,565.

The stocks of ore and copper precipitate broken, raised, and on hand, 31st December, 1898, are valued at £168,305. Compared with the two previous years the figures stand as follows:—

	1896. £	1897. £	1898. £
Estimated value of stocks in England and on the Continent	20,049	39,922	52,588
Estimated value of stocks in Portugal			
Balance of cost of ore at Cementation Works	165,350	111,340	80,120
Ore ready for shipment	16,688	12,126	24,827
Copper precipitate	25,370	13,215	10,770
	£227,457	£176,603	£168,305

The mine assets in Portugal (after writing off for depreciation) stood at 31st December, 1898, at £236,753. These assets embrace the following items, and compare with the preceding two years as under:—

	1896. £	1897. £	1898. £
Works, buildings, land, plant, etc.	72,752	59,053	40,976
Railways, shipping piers, tug boats, etc.....	66,861	64,192	46,277
	139,613	123,245	87,253
Mine stores and cash assets	48,161	49,888	33,783
Stocks of ore and copper precipitate (as above)	207,408	136,681	115,717
	£395,182	£309,814	£236,753

As shown by the profit and loss account, the profit realised on the year's working amounts to £52,565, to which has to be added the balance, £6,372., brought forward from the year 1897, making together the sum of £58,938., and the directors having written the sum of £4,500. off La Sabina shares, there remains a balance for appropriation of £54,438. From this balance the directors recommend the payment of a dividend of 5s. per share and to carry forward the sum of £8,145. to the next account.

Embezzlement by a Soap Traveller.—At Warrington, this week, Herbert Grange, of Lincoln, a traveller for Crosfields, soap manufacturers, Warrington, was charged with embezzling on divers dates sums amounting approximately to £120. The prisoner had admitted defalcations, and had made a statement showing the items. The magistrates said although there were redeeming features in the case, attempts to defraud the Crosfields were so frequent that they would commit him for one month with hard labour.

Impending Amalgamation in the Oil Trade.—Negotiations are now going on between a very wealthy London oil syndicate and the Phœnix Oil Company, which has large holdings in Kansas and other States in America, for the purpose of a unification of all the oil interests held by the Phœnix Company. A very large and wealthy oil corporation will be formed, in which the London syndicate will join, the coalition to become an active competitor of the Standard Oil Company. It has also been stated that the Corsican (Texas) oil interests may join the syndicate. This organisation or syndicate, if consummated, will become one of the largest oil concerns in the world, and will enter upon the production and refining of oils in a very extensive manner. Large refineries and immense tanks are to be built, and the oil output will be conveyed by pipes to Galveston, where the syndicate's steamers will convey the product to London, Liverpool, and other European ports. Representatives of the English syndicate are now in the United States inspecting the oil fields and holdings and the quality of the oil where wells are producing, with a view to making large investments.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Improvements in Filterpresses. J. Critchlow. 7,457. April 10.

Purifying Soap Suds, Trade Refuse, and Sewage. W. Ambler. 7,463. April 10.

Manufacture of Carbonate of Iron. C. Hoy. 7,465. April 10.

Improvements in Coal Gas Scrubbers. G. E. Stevenson. 7,474. April 10.

Improvements in Secondary Batteries. P. M. Justice. 7,479. April 10.

Carbonic Acid Gas Engines. G. S. Dobrashion. 7,481. April 10.

Kilns for the Manufacture of Cement. B. Liban. 7,489. April 10.

Method of Purifying Aluminium. W. H. Hyatt. 7,502. April 10.

Manufacture of Nitric, Nitrous, and Sulphuric Acids and Oxides of Nitrogen. A. McDougall. 7,515. April 10.

Apparatus for the Separation and Recovery of Valuable Vapours. J. R. Whiting and W. A. Lawrence. 7,612. April 11.

Refining Crude Petroleum and its Products. R. Haddan. 7,627. April 11.

Purification of Brine and other Saline Solutions. C. C. Moore. 7,703. April 12.

The Purification of Gaseous Bodies. A. L. Lion. 7,790. April 13.

Oil Testing Apparatus. D. D. Brown. 7,844. April 14.

The Manufacture of Gas. A. E. Hodder and J. B. G. Lester. 7,862. April 14.

Production of Benzoic Acid from Coal Tar Oil. A. G. für Theer, und Erdöl Industrie and G. Kraemer. 7,867. April 14.

Process for the Purification of Anthracene. A. G. für Theer. und Erdöl Industrie and G. Kraemer. 7,868. April 14.

A New or Improved Detergent. I. Goldinger and W. R. Bootland. 7,923. April 15.

Improvements in the Manufacture of Sulphuric Acid. A. C. Clemm. 7,969. April 15.

Improvements in Apparatus for the Manufacture of Superphosphates and other Chemical Manures. D. Crawford. 7,974. April 15.

Improvements in and Relating to Coke Ovens, with Recovery of the Bye-products. R. Brunck. 7,984. April 15.

Improvements in and Relating to the Production of Glucose. A. Oliver. 7,985. April 15.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improved Method of Extracting Oil from Nuts. W. C. Graham, J. H. Kellogg, and W. K. Kellogg, all of Battle Creek, Michigan, U.S.A. Eng. Pat. 577. January 10, 1899.

The nuts (pea-nuts for instance) are slightly roasted at 300°F., and the skins removed. They are then crushed between rolls, placed in a mixer, hot water being added, and stirred into a paste. Finally, a carefully adjusted quantity of either hot or cold water is added, when the oil begins to exude and rises to the top. In practice it has been found that 32 pounds of oil can be obtained from 100 pounds of pea-nuts by the addition of 32 pounds of water. The maximum amount of oil is obtained at a temperature of 130°F., but the difference between this and 40°F. is only about 3 per cent. in the yield of oil. By this method 75% of the total oil in the nuts is extracted. The residue is made into food products.

Improvements in and in Apparatus for Use in the Concentration of Sulphuric Acid or the like. S. Dreyfus, 331, Ashton New-road, Clayton, Manchester, and The Clayton Aniline Co., Ltd., Clayton. Eng. Pat. 11,544. May 23, 1898.

Cast-iron vessels are provided with a spout, like a tea-pot; or with a spout formed in the side by means of a curtain-piece reaching nearly to the bottom. In either case the weak vitriol is introduced at the top and the strengthened acid removed by the spout at the bottom. When starting the apparatus the rectifying vessel is filled with acid sufficiently strong not to act upon the iron when heated. There are two figures.

Improved Process for Opening up Sulphide Ores. C. D. Abel, Southampton Buildings, London, W.C. (Communicated by the Chem. Fab. Rhenania, Aix la-Chapelle, Germany.) Eng. Pat. 3,575. February 17, 1899.

Instead of using polysulphates (*vide* Patent 27,240, 1898, *C.T.J.* 621, p. 251), strong vitriol alone is employed. The ground ore is placed in a pan, heated from beneath, and arranged in connection with a muffle furnace, and treated with sulphuric acid which has been previously heated. When the mass in the pan assumes a pasty condition, it is raked on to the muffle portion of the furnace, and heated until the evolution of gases ceases. The melt is then lixiviated. Zinc and other soluble metallic sulphates are thus removed, while the insoluble sulphate of lead and gangue is treated in the known manner for the production of metallic lead or its compounds.

Improvements in Vegetable Glues or Sizings. F. Hepburn, Derwent Cottage, Sutton, Surrey. Eng. Pat. 10,814. May 11, 1898.

The roots and unground stems of palmetto are cut into thin slices, and steamed at a temperature of about 300°F. for an hour. Water is then added in sufficient quantity to cover the mass, and the whole boiled to extract the pectinous matter. The resulting jelly-like product is run off from the stems and roots, clarified by settling or filtering, and is ready for use, when a little acetic acid has been added to prevent fermentation.

Improvements in and in the Manufacture of Chemical Manures. C. T. G. Dixon, Poplar Grove, Clock Face, St. Helens; J. Crone, D. C. Taylor, and F. Williams, of Sutton Oak, St. Helens. Eng. Pat. 26,682. December 17, 1898.

About equal parts of phosphate rock and the clinker from refuse destructors are ground together, after having been partially crushed separately. It is claimed that the addition of the slag facilitates the grinding of the rock, and renders the phosphate more assimilable.

Correspondence.

**** We do not hold ourselves responsible for the opinions expressed by our correspondents.*

FORMALDEHYDE AND FORMALIN.

(To the Editor of the Chemical Trade Journal).

SIR,—It has come to our knowledge that the Formalin Hygienic Co., or agents of that Company, are spreading the news that they would take proceedings in Court against our depôts, or anyone who would continue to sell formaldehyde, unless that product was bought from them.

It is far from our intention to restrict the said Company or their agents from doing all the business they can, but as sole consignees of the original formaldehyde makers, we have to take objection to proceedings, which are unfair from every point of view, and must leave it to the consumers to judge for themselves, assuring them that we are fully prepared to protect them against any further threats committed by the said company or their agents.

We would have ignored the proceedings of the above-mentioned company or their agents altogether, if they had abstained from calling upon our depôts.

In asking you, therefore, to kindly give the about statement publicity in your journal, we are acting on the instructions of the makers, whom we represent in this country, and shall much appreciate if you will be good enough to reserve a small space for the above.

Yours, &c.,

J. NORRENBERG & CO.

ANSWERS TO CORRESPONDENTS.

S.P. (Hamburg).—The name is probably that of some shipping clerk, and not of a firm. We will do our best to trace it, and forward your communication.

P. O.—No, they will not take stamps for that amount, or cheques for larger sums. Money or postal orders are the only tender.

R.—You can get a typewriting machine for £7. 10s. It is an investment we unhesitatingly advise.

THE GERMAN "SUNLIGHT" SOAP WORKS.—On Wednesday there was called into existence, at Mannheim, the Sunlight Soap Company, with a capital of 3,000,000 marks. The new concern, which in reality is the German branch of the English company bearing the same name, has acquired at Mannheim-Rheinau a site of 85,000 square metres, where a huge factory is in course of erection.—(*C.T.J.*, 597, p 271.)

FATAL EXPLOSION AT A CHEMICAL WORKS.—An explosion occurred at Fleir's Chemical Works, Philadelphia, U.S A., on Tuesday, in which a large number of people were employed Two of these have been killed, and their bodies recovered, and two persons are unaccounted for. One of the bodies found had been blown through the roof, and was got nearly one hundred feet away. The building was completely wrecked, and for over a block from the works not a single building escaped injury, some being badly damaged. As far as is yet known, the sole occupants of the chemical works at the time of the explosion were six men. These include the two whose bodies have been recovered and the two men who are missing. The other victims were occupants of adjacent houses, fully a hundred of which were damaged. It is supposed that the explosion was caused by benzine.

THE GERMAN CHEMICAL AND DYE INDUSTRIES.

[SPECIALLY CONTRIBUTED.]

NO trade has made such rapid progress in Germany of recent years as that devoted to chemicals and chemical products. 1898 was no exception, and the value of the exports now occupies the third place in the list, with the promise that at any time it may take the first, as the figures are very little behind those of the sections devoted to iron and steel and food products, the latter owing its importance to the large production and shipments of beet sugar. The export value of chemicals, drugs, and dyes last year was £17,775,000. against £16,000,000. in 1897, an increase of £1,775,000. On the other hand, the import of £11,650,000. was almost the same, the gain having been only a few thousand pounds. Much of the latter, of course, consists of raw materials which are not obtainable in Germany itself, while of the shipments the bulk is comprised of chemical products and dyes. The section is grouped into so many divisions, some of them dealing with very small items, that space will only allow the more important ones to be treated.

IMPORTS.—Dealing first with the imports, we find by far the largest item is *nitrate of soda*, used very largely in beet cultivation, the value being £3,075,000., though this compared with £3,375,000. in the previous year, is a very considerable decline. The respective quantities were 425,000 and 465,000 tons, and practically the whole of it was received from Chili direct. It must be borne in mind that in the provisional returns with which we are now dealing, valuations are often based on the prices of 1897, and will be subject to rectification later on when necessary. *Superphosphates* were worth £250,000, both value and quantity (namely, 110,000 tons), being almost identical with the previous year. Belgium supplied about half, but 23,000 tons were from this country. Most of the other fertilisers are either to be found in the section devoted to waste products, or are included in unenumerated chemicals.

Some of the other products which figure for substantial amounts are *turpentine*, £560,000. against £500,000. only, the respective quantities being 26,000 and 23,500 tons, nearly all from the United States, but 1,750 tons were of Russian origin; crude *glycerine* for £280,000., and refined for £65,000., both somewhat less than in 1897, when the values were £295,000. and £82,500. *Argols* were worth £70,000., and raw *tartar* a trifle over £100,000., neither showing much variation on the the previous year; Spain and Italy were the sources of the bulk of these. *Cream of tartar*, however, nearly doubled from just over 4,000 to close upon 8,000 cwts., the respective values being given at £12,000. and £24,000. This was nearly all received from France. Of *iodine*, the quantity increased from 360,000 lbs. to 475,000 lbs, the respective valuations being £190,000. and £250,000. About one-third of the supply was from Chili, and rather more than half from Great Britain. There were also a few preparations of iodine valued at £5,000. likewise mostly British. *Phosphorus* was valued at £50,000., and of the 580,000 lbs. more than 80 per cent. was again of British origin. There was a considerable gain in *sulphur*, the quantities in 1897 and 1898 being respectively 25,000 and 30,000 tons, drawn almost exclusively from Italy, or, to be more explicit, Sicily. The value was estimated at £150,000. Like all raw chemicals these are free of duty.

Many chemical products are also on the free list. Foremost among them is *sulphate of ammonia*, the import of which was 30,000 tons, against 33,000 in 1897; of last year's total we supplied just two-thirds, Austria providing about 7,000 tons of what was left. The 1898 valuation in this instance is given at £240,000. only. *Carbonate of ammonia* was valued at £45,000. for 1,580 tons, and was also principally of British make. *Chlorates of potash and soda* are combined, the quantity being 1,325 tons—an increase of 100 tons on 1897—and the value £45,000. Rather more than 50 per cent. was of French and about 25 per cent. of British make. *Sulphate of potash* is included for just 1,000 tons, against 910 tons, and is almost entirely of Austrian manufacture. Bi-chromate of potash was valued at £27,000., the quantity being 685 tons, mostly British. Other salts of potash are lumped together for 11, 600 tons, valued at £84,000, the bulk of them being of United States origin. Most of the 7,820 tons sulphate of soda was Austrian, the value being estimated at £11,000. Other salts of soda are quite insignificant. The duty of £2. per ton on caustic soda precludes the chance of much trade; the import was 580 tons only, valued at £5,600., and 510 tons were of British make. The previous year's import was 905 tons. A similar rate of duty on caustic potash has the same effect, the import being limited to 165 tons, mostly French.

Drugs and medicinal articles are for the present mainly classed together, the value for 1898 being estimated at £340,000., against £295,000. in 1897. They are obtained literally from China to Peru, both actually figuring as countries of origin. The greatest weight was from British India, followed by Austria and Italy, but in the absence of details this is of course nothing to go by. One or two items are stated separately—cinchona bark, for instance, was imported to the extent of 70,000 cwts., valued at £120,000., against 84,000 cwts. the previous year. It is mostly obtained from Holland and this country, with a little drawn direct from the Dutch Indies. A little quinine and salts of quinine is purchased, mainly from France, but the value was only £6,500. Rhubarb appears for £18,000., most of the 235,000 lbs. it represents being obtained from China.

The most interesting division is that devoted to *dyestuffs*, as here perhaps, more even than in chemicals pure and simple, the Germans excel. Of the natural dyes, indigo heads the list, the quantity imported last year being 2,280,000 cwts., a falling off of some 800,000. The supplies are mostly drawn directly from the East, but a fair quantity is obtained through this country and Holland. The value was estimated at £460,000, against £630,000. Cochineal figures for the very modest sum of £11,000., a slight improvement, however, on 1897. Cutch was imported to the extent of 130,000 cwts., against 115,000, the value being £133,000. Most of this was from India direct, with a little through British ports. Sumac, nearly all from Italy and Austria, figured for 125,000 cwts., worth £52,000. Myrabolams, likewise from British India, were valued at £65,000. for the 10,900 tons received. In artificial dyes, aniline and other tar products were valued at £195,000, against £185,000. More than half of the 2,250,000 lbs. represented was procured from Switzerland, which competes keenly with Germany in this industry. France and Great Britain come in a bad second and third respectively. The aniline salts and oils, however, were almost entirely British, the total being 1,600,000 lbs., valued at £45,000., a decline from £60,000. in 1897.

Naphtha and other coal products were imported to the extent of over 8,000 tons, of which 6,800 were also British, the total comparing with 6,500 tons only in 1897, the respective valuations being £200,000. and £160,000. Dyewood extracts were worth a further £160,000., a slight falling off compared with 1897, the respective quantities being 83,000 and 88,000 cwts. Of the former, France supplied 56,000 and the United States 19,000 cwts. Dyewoods are classed according to colour, blue being the most important, valued at £170,000 against £220,000., the quantities being 28,500 and 37,000 tons respectively. Mexico supplied upwards of 15,000 tons, Dominica, Hayti, and British India most of the rest. Yellow woods were worth £18,000., and reds, £12,000; South America being the origin of both. Quebracho wood, from the Argentine, increased from 81,500 to 113,500 tons, valued at £280,000.

Though the principal acids figure in the import list, Germany supplies most of her own requirements in this respect, and ships more than she receives. The most important is *carbolic acid*, of which Great Britain shipped 3,650 of the 4,040 tons imported, the value of which was returned at £80,000 This was an improvement of 400 tons on 1897. *Sulphuric acid* comes next with less than £25,000., Austria shipping nearly 6,000 and Holland 1,700 of the total of 9,000 tons, also a slight increase on the previous year. There is nothing else for more than a few thousand pounds. We supplied most of the citric and oxalic, Belgium the nitric and hydrochloric.

There is much else included under the general heading, but we need not enter into particulars; some of the items, in fact, like ice, esparto grass, and brush-makers' materials, being hardly germane to it at all. Tanning materials are also included, valonia and oak tans, to the value of £130,000., and tanning extracts for £285,000. Gums figure for £160,000., and camphor for £105,000., bone meal for £105,000., and mineral waters for £100,000.

Unenumerated ethereal oils are represented by the large total of £325,000, and are imported from every quarter of the globe. Of varnishes, worth £110,000., Great Britain supplied 490 of the 910 tons, the total having increased by 100 tons. Gallapples were worth nearly £150,000., China supplying 35,000 of the 57,000 cwts., Turkey, 11,000, and Great Britain, 7,000. There is a further considerable variety of other miscellaneous products and substances.

EXPORTS.—In dealing with the exports, it will be as well to take the dyes first as being the most important and representing the greatest proportionate value. The shipments of aniline and other coal tar products easily head the entire list with £3,750,000., and show the very substantial gain of £385,000., or more than 10 per cent. over 1897. The weight was upwards of 43,000,000 lbs, and the distribution world-wide. The United States were the largest purchasers, taking 9,250,000 lbs., but we came in a good second with 8,750,000 lbs., while British India helps to swell the total to the extent of over 2,250,000 lbs. The takings of other British possessions are only trifling. Austria followed a respectful distance behind with about half this quantity, and then in relative importance are China, Italy, Russia, Belgium, France, Japan, and Switzerland, all over a million pounds, and a great number of others for under a million. Aniline oil and salts form another important feature, the value being £770,000., an increase from £570,000. the previous year. The weights were respectively 27,000,000 and 20,000,000 lbs. The United States again take the lead with 8,750,000 lbs., but Russia, Switzerland, and France follow, our share in this instance being only some 1,750,000 lbs. or very little more than we ship to Germany. Alizarine does not show anything like a proportionate expansion, the respective values for the two years being £660,000. and £620,000.,

while quantities were 20,000,000 and 19,000,000 lbs. The only large buyers are British India, the United States, and Great Britain, in quantities ranging from five and a half down to four and a half million pounds. Austria is the next with only one million. These three products thus represent upwards of £5,000,000., or nearly one-third of the total exports of chemical and dye. Light coal-tar oils figure for a further £50,000., of which France is the largest purchaser.

Other dyes and colours figure for substantial sums. Berlin blue was valued at over £50,000., and of the 1,325,000 lbs., some 300,000 was destined for this country, India, Belgium, and the United States having been free purchasers. The shipments of ultramarine were valued at £112,000., and of the 9,000,000 lbs. we were by far the largest buyers, 3,850,000 as compared with 700,000 lbs. to Belgium, the next on the list. There was a small quantity of madder shipped, but the value was only £2,500. Prepared water colours were valued at £135,000.. as against £132,000. These are very widely distributed, and no one country figures for any preponderating quantity, our share—which is fairly representative of a number of others—being about 5 per cent. of the total. In this connection we can also notice blacklead and various coloured pencils, the value of which reached the large sum of £210,000., though it showed practically no change on 1897. Here, again, Germany supplies the world, though we are by far the largest customer. The total weight was 26,500 cwts., and of this we took 6,250, or just 25 per cent. France is next in importance, but with 2,150 cwts. only; the United States received 1,400 cwts., very little more than the 1,100 shipped to Turkey. Printer's ink may also be mentioned for £50,000., but Austria, Holland, and Switzerland are the only important buyers in this instance.

There is also a re-exportation of some of the natural dyes; indeed, nearly the whole of the indigo imported was re-shipped principally to the United States, Austria, and Russia, but to some extent also to Italy, Holland, and even Great Britain. Thus only some 250,000 cwts. was retained for home use, so largely has Germany come to rely on her own artificial dyes. Of cutch there was also a re-export, valued at £45,000., Russia and Austria being the principal buyers. Of cochineal and sumac, the shipments were only trifling. Finally, there is a large item of £490,000. for unenumerated dyes and colours, an increase of £10,000. over 1897. The distribution of these is again world-wide, but Great Britain and the United States are the largest individual buyers. Other European countries are moderate ones, while the Far East and South America are small customers only.

(*To be continued.*)

EXPORTS OF ALKALI AND BLEACH.

THE following returns, which are taken from the official foreign and colonial statistics of the United Kingdom, give the amount and value of alkali and bleaching materials shipped to the undermentioned countries for February, 1899, as compared with February, 1898 :—

ALKALI.

Port.	1898.	1899.	1898.	1899.
	Cwts.	Cwts.	£	£
Russia	5,735	4,532	1,913	1,246
Sweden and Norway	6,467	4,294	1,566	1,135
Germany	11,033	1,160	2,493	443
Holland	9,044	10,637	1,951	2,129
France	3,406	3,058	1,357	1,110
Spain and Canaries	28,211	33,382	9,295	10,598
Italy	17,585	14,136	5,371	3,858
United States	82,094	35,618	15,528	7,056
Australasia	13,854	14,867	4,185	4,564
British North America	5,042	3,809	1,383	853
Other countries	101,642	126,116	29,616	37,751
Total	284,113	251,609	74,658	70,743

BLEACHING POWDER, ETC.

Port.	1898.	1899.	1898.	1899.
	Cwts.	Cwts.	£	£
United States	57,950	68,959	16,892	15,720
Other countries	22,421	27,215	6,957	7,625
Total	80,371	96,174	23,849	23,345

THE FARNWORTH TAR WORKS EXPLOSION.—William Vickers, foreman painter, of Queen-street, Farnworth, one of the two men who was severely burned by the explosion last week at Mr. R. Lowes' tar and cement works, Farnworth, died at Bolton Infirmary on Sunday. His companion, George Hindley, of Longcauseway, who was also badly burned, still lies in a critical condition.

Official Memoranda.

(*From the Board of Trade Journal.*)

MINERAL PRODUCTION OF SPAIN.

Manganese.—The production of manganese in 1898 continued to be limited to the district of Huelva, since the production in Oviedo, Teruel, and other provinces is insignificant.

The whole produce is exported, and up to now none has been used in native industries.

Country of Destination.	Tons.
Belgium	126,769
France	6,586
England	4,179
Germany	528
Total	138,062
Total in 1897	100,333
Increase	37,729

The production has therefore been increased 37 per cent.

Quicksilver.—The following table shows the production of quicksilver in Spain in the years 1897 and 1898 :—

Mines.	1897. Flasks.	1898. Flasks.
Almaden	47,357	46,211
El Porvenir (Mineres)	1,600	1,450
La Union Asturiana	472	450
La Soterrana (Pola de Lena)	100	71
Various in Asturias and Granada	554	540
Total	50,083	48,722
Decrease	—	1,361

The Almaden mine produced 1,146 flasks less in the year 1898 than in the previous year.

Copper.—The following table shows the production of copper in Spain by the Rio Tinto Company :—

Products.	1897. Tons.	1898. Tons.
Copper mineral	1,388,026	1,465,380
Broken pieces (*cascara seca*)	19,505	18,722
Copper ore	16,120	16,024
Copper slags	—	444
Sulphate of Copper	3,914	4,481

The Rio Tinto Company also produced 70,814 tons of pyrites without copper, 1,248 tons of argentiferous lead and 15,829 tons of iron.

Common Salt.—The production of common salt which had diminished in 1897 to 508,605 tons from 521,751 tons in 1896, must have continued to decrease, as the consumption remains the same, and the exportation was less than in the previous year, having been as follows :—

Years.	Tons.
1896	254,803
1897	235,871
1898	219,301

THE RUSSIAN SALT INDUSTRY.

The American Consul-General at St. Petersburg reports that the first meeting of the Russian salt producers has been held in the Ministry of Agriculture and Crown Domains at St. Petersburg.

In addition to the well-known Crimean salt mines, one of the richest beds of rock salt is in the Bakhmut district of the Donetz basin, where salt has been produced regularly since 1881, increasing yearly, and amounting in 1897 to 19,000,000 pouds (about 306,000 tons). The beds are worked the whole year, and, owing to favourable conditions and the high quality of the salt, this district is successfully competing with all the other salt mines of Russia. The salt works near Bakhmut and Slaviansk, which produce salt from wells, are also well known, their production having amounted in 1897 to about 80,000 tons.

In the Northern Caucasus salt is produced in small quantities from small lakes. There are a few salt lakes in the government of Baku, the annual product of which amounts to about 8,000 tons.

In the Erivan government and Karsk region rock salt is produced only from large beds which run along the Russian-Turkish-Persian frontier, 398 miles along the Russian territory. In some places these beds occupy an area of about one square mile and 280 feet thick, which shows that they are very rich. The production of salt in that region does not exceed 32,000 tons per year, but there is reason to expect that after the construction of the Kars railroad, with a branch

to Erivan, the Trans-Caucasian salt will find its way to the Russian markets, and the productiveness of the local mines will increase.

The Trans-Caspian region produces about 24,000 tons of rock salt, and a like amount of lake salt comes from Turkestan annually.

In Poland salt is produced only in the Tsekhotsensk factory, which belongs to the government, and lies near the Russian frontier. At present this factory is leased by the heirs of General Glinka-Mavrin, and produces under 5,000 tons yearly, whereas about 95,000 tons are required to supply the demands of the Polish governments.

In Siberia the production of salt is comparatively small—from 32,000 to 48,000 tons a year. This is principally due to the fact that the salt-bearing regions are far from the markets, and to the absence of convenient ways of communication. It is therefore not surprising that salt is brought to Siberia from European Russia (through Odessa) and partly from America. Thus, during the past autumn there was such a demand for salt in Eastern Siberia that the Ministry of Agriculture sent by rail, through Omsk to Irkutsk, nearly 2,000 tons of salt from the Koriakov Lake, in Eastern Siberia. In Western Siberia salt is produced from salt lakes, and in Eastern Siberia it is produced by decocting brine. There are in the Yakutsk region well-known rock salt deposits, but until now they have not been worked, as they are far from inhabited localities. The prices of salt in Siberia are exceedingly high, amounting to £11. 19s. per ton; whereas in European Russia the price fluctuates between £2. 13s. 2d. and 13s. 3d. per ton.

The Russian salt industry began to develop as an important industry in November, 1880, when by an imperial ukase the excise duty on the same was abolished. Thus, during the ten years 1871-1880, while the excise was still in force, the production of salt in Russia did not exceed 693,000 tons, while from 1888 to 1897 it amounted to nearly double, and the prices decreased accordingly.

The importation of foreign salt has also decreased greatly, amounting at present to about 8,000 tons per annum, which go principally to the Baltic region and Poland. During recent years salt from the Donetz basin has found its way to the above regions, and therefore it is to be expected that the import of foreign salt will become still smaller.

MARSEILLES CEMENT TRADE.

Most of the cement imported into France comes from Belgium, and the supply of this merchandise from England grows less and less year by year. The natural cements of Marseilles and Grenoble find their market in Italy, Spain, Turkey, and Algeria.

It seems likely, that not only will the imports of cement from Great Britain continue to decrease, but the cheaper grades of French cements will very shortly find a market there for re-export.

The prices now ruling at Marseilles are as follows, f.o.b.:—

	Per French ton.	Per English ton at par.
Slow-hardening "Portland"	30 francs	£1 4 5
Theil "	50 "	2 0 8
Grenoble "Chartreuse"	50 "	2 0 8
Semi slow-hardening 'Valentine'	26 "	1 1 2
Quick-hardening "Marseille"	29 "	1 3 6

PROHIBITION OF WHITE PHOSPHORUS MATCHES.

A despatch has been received at the Foreign Office, from H M. Minister at Berne, forwarding copy of a Federal law, which prohibits, by Article 4, the manufacture, importation, exportation, or sale of lucifer matches with white (yellow) phosphorus.

A Federal Decree, dated the 10th March, and just published, fixes the 1st April, 1900, for the cessation of their manufacture, the 1st June, 1899, of their importation (and of white phosphorus in any form, except for scientific, pharmaceutical, and other harmless purposes), and the 1st January, 1901, of their sale or exportation.

Dynamite in the Transvaal.—The managing director of the Explosives Company, Mr. L. G. Vorstmann, made another offer to the Government in respect of the price of dynamite. The proposal as regards the reduction to 70s. and 90s. for dynamite and blasting gelatine respectively remains unaltered; but the condition is now inserted that in the event of the Government reclaiming the 5s. per case, which it at present foregoes in the interests of the industry, the price in each case shall be increased by 5s. The stipulation with regard to the fifteen years' extension of contract when the present term expires is withdrawn, and a clause substituted that when the existing contract (of May 24, 1894) expires the Government shall take over the factories at a price to be fixed by arbitration. The company still retains the right, however, to claim the preference in the event of the Government releasing or selling the factories.

Parliamentary Jottings.

PETROLEUM REGULATIONS IN INDIA.

In the House of Commons on Monday, in answer to Sir E. H. Hill (Bristol, S), Lord G. Hamilton said the Act passed in February last was mainly a consolidation Bill, but with important amendments. The legal flash point is 76° close test, but a cargo of petroleum, or petroleum held by dealers, is allowed if the samples selected from such petroleum have their flashing points on an average at or above 73°, and if no one of these samples has its flashing point below 70°. A despatch from the Government of India, dated Simla, April 24, 1895, states that after a full inquiry the legal flash point was found to be satisfactory. The despatch concludes as follows:—"The reports which we have now received show that there have been a few lamp accidents, but their occurrence does not appear to us to justify the raising of the present legal *minimum* flashing point, and we see no reason for modifying the opinion previously formed by us in regard to the matter." In the discussion on the Bill, the question of raising the flash point was not suggested.

BRITISH COLONIES AND PENNY POSTAGE.

On Tuesday, Mr. Akers-Douglas, in reply to Mr. Hogan, stated that the Government of Jamaica had decided to adopt on the 24th May the penny postage scheme in force between this country and various British colonies and possessions. The directors of the North Borneo Company had also decided to introduce the scheme in North Borneo and Labuan, but had not yet fixed a date for carrying their decision into effect, and the Government of Mauritius was expected to join. If these British possessions all carried out their intention on the 24th of May the only important colonies that would then not be included in the penny postage scheme would be Australia, New Zealand, and the Cape of Good Hope.

INDIAN SUGAR FACTORIES.

In answer to Sir. W. Wedderburn, Lord G. Hamilton said, there are, I believe, about eleven sugar factories in British India producing refined sugar according to European methods. But complete statistics of the output of these factories are not available; nor can any trustworthy estimate be formed of the amount of such sugar produced by native methods.

THE CHEMICAL AND FERTILISER TRADE OF CHARLESTON.

LAST year Charleston held its position as the principal centre for the manufacture of phosphate fertilisers in America. Most of the mills did well, and continue to do so this year, with the better railway facilities and freight rates. There has been a general combination of the fertiliser manufacturing industries so as to make them practically under one management for the future, thus securing greater concentration of capital and increased economy in working expenses.

The phosphate deposits are mined for home consumption and export to the following countries, namely: Algiers, Tunis, Mexico, Hayti, British West Indies, Dutch West Indies, Canada, Spain, England, France, Belgium, Germany, Norway, Russia, and in the United States. The mining is carried on in South Carolina, North Carolina, Tennessee, Florida, Pennsylvania, and Virginia. According to a statement made by Messrs. Wm. Stubbs and Co., of Bristol, Western Europe consumed, during the period from 1840 to 1895, the following quantities:—

Year.	Quantity. Tons.
1840	3,000
1850	15,000
1860	50,000
1870	75,000
1880	250,000
1890-91	200,000
1893	1,500,000
1895	1,865,000

The American export trade in phosphate is worth £1,000,000. a year; shipments to Germany amounting in value to £400,000., and shipments to Great Britain to £200.000.; Canada, Japan, Australia, and the West Indies are also good customers.

There were a great many changes last year in the ownership of the mining properties; the Magnolia mines, the Horseshoe mines, the Farmers' Phosphate Mining Company, and the St. Helena Mining Company all changed hands.

During the early part of 1897 great stagnation prevailed in all branches of the business; many of the mining companies made but little profit, and although there were a few exceptions the changes made in ownership of these properties will greatly affect the business of river mining during the present year. But it is impossible as yet to say what the effect will be on the land mining companies, as the latter

conduct their operations altogether on land, and it is possible for them to control their output better than the river mining companies.

The State of South Carolina lost heavily in royalties last year on account of decreased mining operations of the river companies.

During the year 1890 the State received on account of phosphate royalties, £47,400.; in 1891, £34,000.; in 1892, £38,400.; and in 1893, £51,400.; the aggregate income which the State has derived from this source having amounted to about £600,000.

It is estimated that the South Carolina mines are able to supply at least 600,000 tons of phosphate rock annually; the relative consumption in this and other States is as follows:—South Carolina uses phosphates to the value of £560,000.; North Carolina, £750,000,; Pennsylvania, £563,000.; Virginia, £800,000.; New York, £939,000.; and Georgia, £940,000.

During the past year the Virginia and Carolina Chemical Company purchased the Southern Fertiliser Company, embracing works at Rome (Georgia), Atlanta, Savannah, and Cordele (Georgia), at a cost of 750,000 dol. Other changes also occurred, many of the Charleston local companies having undergone new ownership, including the Ashley, Stono and Wando Companies, the Wappoo Mills and the Wilcox and Gibbes Company.

It is believed that one result of the late Spanish-American war will be to open up a new and growing field for phosphate business in the newly acquired territories of Cuba, Manila, and Hawaii.

The total shipments of fertilisers from Charleston during the business year of 1897-98 amounted to 437,128 tons, compared with 374,494 tons for the previous year of 1896-97.

During last year shipments from Savannah were 110,000 tons, and Port Royal 36,000 tons, and for the previous season Savannah's shipments were 120,000 tons and Port Royal 35,000 tons.

THE IMPORTS OF CHEMICALS

used in the manufacture of fertilisers at Charleston last year were as follows:—

Articles.	Quantity. Tons.		Value. £
Kainit	41,667	..	53,450
Muriate of potash	6,473	..	42,664
Pyrites	37,601	..	11,600
Manure salt	3,355	..	8,125
Nitrate soda	3,399	..	19,300
Sulphate potash	84	..	623
Sulphur	23,941	..	15,000
Dried blood	127	..	740
Brimstone	4,730	..	16,767
Total	121,377		£168,269

The total quantity and valuation of the above-mentioned chemical imports show that, in comparison with 1897 there was an increase in 1898 of 13,549 tons, valued at £5,890.

Phosphate rock is found along the margins and in the beds of the Carolina navigable streams, much of it being very conveniently situated for conveyance to railways; it can be mined quickly and delivered alongside steamers and sailing vessels for shipment abroad and can be cheaply loaded on cars for inland use.

Up to the present time no great amount of phosphate has been mined in North Carolina, the total shipments last year having amounted to only 12,500 tons, almost all of which was shipped to places within that State. It is expected, however, that the extent of phosphate mining will increase, and that in future it will become an article of export.

Tennessee rock, which has now become a recognised branch of the phosphate industry of the country, is of good quality and can be mined easily and cheaply; it is also found in considerable quantities, and some of the deposits are accessible to railway lines, but the principal disadvantage is in its remote situation from the ocean, compared with the Carolina and Florida rock. Pensacola, on the Gulf coast of Florida, is the nearest available port of foreign shipment for this product, although there seems to be an impression that with better and improved railway connections, Newport News, Virginia, will likely become in future the principal point for shipment of Tennessee phosphate to foreign countries.

The growth of this business so far has been rapid and appears to be increasing; the output last year was over 250,000 tons, it having grown to this volume from almost nothing four or five years ago.

There were no foreign shipments of phosphate rock in its crude state from Charleston last year, and the total shipments to home ports and interior places together with the quantity consumed here were 323,121 tons, of which 170,000 tons were consumed by the local fertiliser companies; compared with the previous year's total shipments of 322,272 tons, of which 1,300 tons were exported, 145,000 tons consumed here, and the remainder shipped to home ports.

Shipments of South Carolina rock from Beaufort were, during last year, 86,460 tons, of which 49,463 tons went to foreign countries, 16,000 tons were consumed locally, and the rest shipped to home ports and interior places in this country; compared with shipments the previous year of 111,846 tons, of which 75,108 tons went to foreign countries, 17,000 tons were consumed locally, and the rest shipped to home ports and places.

Prices quoted for Carolina phosphates, September 1, 1898, were as follows:—For Charleston crude rock, at mines, 3 dols. per ton; Charleston hot air dried, Ashley river, 3 dols. 25 c. per ton; Charleston hot air dried at City, 3 dols. 50 c. per ton; Charleston ground rock in bulk, 5 dol. 50 c. per ton.

The newly discovered phosphate deposits in Juanita County, Pennsylvania, between the Oriskany sandstones and the Owandaga limestones, are said to be poor both in phosphate and lime.

The discoveries reported in Arkansas have so far attracted but little attention.

Phosphate deposits discovered in Decatur County, Georgia, owing to their nearness to Florida, have not been developed to any extent up to this time.

Phosphates found in the "Bad Lands" of Dakota have amounted to nothing commercially.

Later phosphate figures covering the period from September 1 to December 31, 1898, at Charleston were as follows:—Total exports of crude rock were 39,466 tons, all of which was shipped to home ports and places, compared with 29,950 tons shipped during the corresponding period of 1897.

THE CARRIAGE OF CARBON BISULPHIDE.

AN inquiry was held this week, before Mr. Howard Smith and Captain Castle, respecting the explosions and fire on the *Italian Prince* on December 9 last, in which were raised important questions as to the transport of bisulphide of carbon. This product is not specifically mentioned in the dangerous goods section of the Merchant Shipping Act.

Mr. K. E. K. Gough appeared for the Board of Trade, and Mr. Lauriston Batten for the owners, the Prince Line (Limited).

The *Italian Prince* is a steel ship of 3,083 tons, built at Sunderland in 1893, registered at Newcastle; classed 100 A 1 at Lloyd's. She left London on October 14 with a crew of 33 hands and a general cargo, bound for Tampico and New Orleans. Amongst the cargo were ten steel casks or drums, containing bisulphide of carbon, shipped by Messrs. Foster and Gregory (Limited). The drums were supplied to the shippers by Messrs. Noakes and Co. They had been tested up to a pressure of 10 lbs. to the square inch. Their capacity was about 50½ gallons, and they contained on this voyage about 46½ gals., a margin of about 7 per cent. being left for expansion. They were labelled "Bisulphide of carbon, on deck," but were not labelled "Dangerous" in accordance with section 446 of the Merchant Shipping Act. The drums were stowed beneath the poop. On December 3 the vessel reached Tampico, and there shipped 690 bales of hemp. She left on December 8 for New Orleans. On December 9, about 2 p.m., whilst in the Gulf of Mexico, flames were suddenly seen issuing from beneath the poop deck. Explosions were heard at intervals of about three minutes. The hoses were turned on and the steam extinguishers applied to holds 3 and 4. After the fire had been extinguished it was found that all the drums containing bisulphide of carbon had exploded, and that a large portion of the hemp, the poop, and the main deck fittings had been destroyed.

Captain George Willis, the master, stated that the drums were properly secured; they were restowed at Tampico; they never gave off any smell. After leaving Tampico rough weather was experienced, so that there might have been friction between the drums. The drums were only partially covered by the poop. No smoking was allowed aft of the foremast.

Mr. William George Forster, managing director of Messrs. Forster and Gregory (Limited), said that he was a chemist by profession. Bisulphide of carbon was used for various purposes in England and abroad. His firm had exported several thousands of tons and had had hardly any complaints. He considered it should not have been stowed under the poop, but on the deck, absolutely exposed to the atmosphere. In such circumstances it would not be dangerous. If marked "Dangerous," shipowners would refuse to take it.

Dr. Dupré, adviser to the Home Office on explosives, said that bisulphide of carbon was a heavy volatile liquid. The vapour given off by the liquid was 2·63 times as heavy as air. The liquid had a very high rate of expansion, about ten times that of water. Both the liquid and the vapour take fire at very low temperatures. A steam pipe or a heated surface would ignite either the liquid or the vapour. The witness considered that a safe method of carrying the liquid would be in smaller drums, tested up to a pressure of 30 lbs. to the square inch, and that if the drums are filled at a temperature of 40° Fah., 10 per cent. should be allowed for expansion. Such cargo should be stowed under a poop or other place, so as to keep the sun off and at the same time allow ventilation. It should not be stowed in a hold.

Mr. Gough submitted an elaborate schedule of points on which the

Board of Trade requested the inspectors to report, with a view to preventing similar casualties in the future, including the question whether bisulphide of carbon was dangerous for carriage on board ship.

It is understood that the inspectors will report to the Board of Trade and that the result of their investigations will be published by that department.

Trade Notes.

Prevention of Corruption Bill.—This Bill has been published, and is now on sale at Messrs. Eyre and Spottiswoode's, East Harding-street, London, E.C., at 2d., post free. We should advise all interested to obtain a copy.

Costs in the Castner-Kellner Case.—In the case of the Castner-Kellner Co. *v.* Commercial Development Corporation, further considered judgment of the Court of Appeal was delivered on Saturday last, when the court held that the Commercial Development Corporation were entitled to their further costs against the Castner-Kellner Company of the shorthand notes of the trial, and also the costs of the objections to the plaintiffs' claims, amounting to a considerable sum.

Metol Development after Fixing.—Messrs. Fuerst Bros. send us their latest formula for this purpose. It is as follows: —Take ½oz. to 1oz. of the following solution: Metol, 120 grains; sulphite of sodium, 2½oz.; water, 2:oz. After an hour or two, according to the exposure given (the plates should be strongly over-exposed, and all traces of hypo removed), the positive image appears full of detail, visible by reflected light, but scarcely perceptible by transparent light. At the end of two hours the image has grown sufficiently to be intensified with mercury.

Society of Chemical Industry—*Manchester Section*.—The Seventh and last meeting of the session will take place on Friday, May 5th, 1899, in the rooms of the Chemical Club, Victoria Hotel, at seven o'clock in the evening, when the following papers will be read: - A communication from Dr. E. Divers, F.R.S., Imperial Mint, Tokio, Japan, upon Dr Grossmann's paper on Hydrosulphites of Soda; A New Series of Hydrosulphites, and their use in Indigo Wool Dyeing, by Dr. Grossmann; On some points in the Analysis of Water, by G. H. Bailey, D.Sc., Ph.D., and J. H. Johnston, B.Sc.

Gambier Statistics.—Messrs. Frank R. Leonori & Co, of 76, Pine-street, New York, give the statistical position, April 1st, as follows: "In store, New York, 37,000 bales; do. Boston, 1,600 bales; afloat for and at New York—sailer Emily Reed, in port, discharging 12,000 bales; steamers due in April, 1899, 4,500 bales; steamer due in May, 1899, 1,000 bales; sailer Onaway, due about May 5, 1899, 7,000 bales; sailer Isaac Reed, due about June 15, 1899, 9,000 bales; sailer Paramita, due about July 15, 1899, 9,500 bales. Visible supply to August 1, 1899 (four months), 81,600 bales. Total deliveries for consumption for January, February and March, 1899 (three months), 39,021 bales. Loading at Singapore – Berlin and Maria."

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols continue weak at 7½d. for 90's and 7¾d. to 8d. for 50/90's. Carbolic acids keep fairly steady, without change in values, but naphthas are easier, particularly solvent, which has experienced a decline of 2d. in a fortnight, being now quoted at 10d. Anthracene is being done at somewhat remarkable prices, even for anthracene. Creosote and pitch appear to be the only two articles that retain any life, the latter being firm at 27s. 6d., f.o.b. East Coast and 24s. 6d. West Coast.

Sulphate of ammonia is dearer, and the tone of the market generally has improved. There has been a fairly good forward business done. Closing prompt values are: —Beckton, £10. 17s. 6d. to £11. London (outside makes), £11; Hull, £11.; and Leith, £11. 2s. 6d. Nitrate of soda steady at 8s. 6d. cwt. for refined.

MISCELLANEOUS CHEMICAL MARKET.

There is a continued good demand for all products of the alkali trade, and prices all round are firmly maintained, though, as yet, there is no appearance of any advance except in sulphate of copper, which has further risen in value to £26. 5s., f.o.b. Bleaching powder is in strong request for export at £5., f.o.b. Liverpool; softwoods, on rails, remaining at £4. 2s. 6d. to £4. 5s. per ton. Chlorates unchanged in position or value. For caustic soda the quotations are, f.o.b. Liverpool:—77% £7. 12s. 6d.; 74%, £7. 7s. 6d.; 70%, £7.; 60%, £6. per ton, ten to lots. Ammonia alkali, £3. 17s. 6d., bags, f.o.r. Soda crystals an bicarbonate unaltered. In saltcake there is rather more offering, an price somewhat easier at 27s. 6d. per ton, f.o.r. makers' works. Sulph firm at £4. 11s. 3d. per ton. Potash, caustic and carbonate, have ready sale; carbonate, 90%, at £15., c.i.f., and caustic, 90%, £22. pe ton. Brown acetate of lime is steadier at £4. 17s. 6d. to £5., c.i.f. grey, £7. 15s. to £8. per ton. White sugar of lead, foreign, rathe weaker at £24., c.i.f. Nitrate of lead firm at £22. per ton. Yello prussiate of potash and soda scarce and firm at 8d. and 6¼d. per lb respectively. White powdered arsenic, £18. 15s. to £19. for be brands, and supply much reduced. Aniline oil and salt quiet. Ca bolic acids, crystals and liquid, are unchanged in value and only mode ate business passing. Borax somewhat unsteady at £15. 10s. to £1 per ton. Zinc salts are dearer. Green copperas is in better gener request, and price rather firmer. Nitrate of soda offers at 8s. per cw Ammonia salts somewhat irregular, but sulphate is firm. Gener business in chemicals is still reported quiet.

REPORT ON MANURE MATERIAL.

There has been further business done in mineral phosphates for 189 and 1900 shipment, both for the United Kingdom and Continent, an the tendency of prices is rather in the upward direction.

It is realised that the consumption of superphosphates within the past two months has increased enormously all over the Continent and in the United States, and, in consequence, manure manufacturers have within the past two months practically completed their 1899 requirements and the bulk of their requirements for 1900.

Bombay bone meal is firm at £5. per ton, ex-quay Liverpool, and this price would also be taken for parcels afloat.

Nitrate of soda is, owing to arrivals, again easier, and the closing value is 8s. 1½d. per cwt., ex-quay, for fine quality.

LIVERPOOL OIL AND COLOUR MARKET.

Wednesday.

OILS.—There is only a small quantity of Palm oil offering, so that the market keeps steady in tone. Olive is firm, and meets with a limited demand at full prices. Linseed oil is quiet, with Liverpool makes at 18s. 9d. to 19s. 6d. cwt. in export casks. Cottonseed is quietly steady, with sellers of Liverpool Refined at 17s. to 17s. 6d. cwt. Castor oil is rather steadier both for spot, and to arrive. Good seconds Calcutta have been done at 2¾d., and sellers offer first pressure French at 2¾d. per lb. Tallow is dull, and buyers seem very indifferent. There is a moderate trade doing in all grades of Resin at recent quotations, which are steadily maintained. Spirits of Turpentine are firmly held at 35s. 3d., at which there is a fairly good inquiry. Petroleum is quiet at 6d. to 7¼d. for American; and 5¼d. to 5¾d. per gallon for Russian Refined.

CAKES.—There is a firmer feeling in the market for American Western linseed on the spot, and prices are quoted 2s. 6d. dearer, with rather a better demand experienced at £5. 15s. to £6. 5s., and Liverpool makes are also a shade steadier, the value being now given at £7. 12s. 6d. to £8. 10s. per ton, according to brands, but only a moderate business has resulted thereat. In other imported descriptions River Plate have sold to a fair extent, and moderate sales have been effected in Bombay, but Russian are rather quiet, the respective quotations being steadily maintained at £6. 10s. to £6. 15s., £7. 2s 6d. to £7. 3s. 9d., and £7. 5s. to £7. 7s. 6d. per ton. Good to choice brands of American decorticated cottonseed are unchanged, but the business passing is only on a moderate scale at former rates, viz., £5. 10s. to £6., according to quality, with a quiet trade doing in Liverpool makes at £6. 5s. to £6. 15s. per ton, according to brand. There has been a fair consumptive business concluded in Liverpool undecorticated makes at former rates, viz., £4. 15s. to £5. 5s., according to brand, and Egyptian on the spot have a fair sale at £4. 7s. 6d. to £4. 10s. per ton, with a moderate demand thereat.

THE METAL MARKETS

LONDON, Wednesday.—Pig iron dearer: Scotch Warrants closed at 62s. 7½d., Middlesbrough, 55s. 11d., cash, and hematite, 63s. 6d. Copper firm: Chili bars, G.O.B.'s and G.M.B.'s, closed at £77. 5s. to £77. 10s. cash, and £77. to £77. 5s., three months. Tin firm: Straits closed at £117. 10s. to £118. cash, and £118. 10s. to £119. three months; Australian, £116. 7s. 6d., English ingots, £119. Lead quiet: Spanish, £14. 6s. 3d. to £14. 7s. 6d.; English, £14. 10s.

Silesian spelter, ordinary, £28. 12s. 6d. to £28. 15s Nickel, 1s. 2½d. Antimony, £39. to £39. 10s. Quicksilver: first hands, £7. 17s. 6d.; second hands, £7. 17s. *Copper Shares* steady: Cape, 4 11/16 to 4 11/16; Copiapo, 3¼ to 3⅜; Labiola, 2 1/16 to 2 3/16. Mason and Barry, 4⅛ to 4⅜; Rio Tinto, 48½ to 48⅝; Tharsis, 9⅛ to 9⅜.

GLASGOW, Wednesday.—Market irregular, and a good business. Scotch done at 59s. 6d., 59s. 6½d., and 59s 3d. cash; also at 59s. 6d., 59s. 9d., 59s. 4½d., and 59s. 5d. month; buyers, 59s. 3d. cash; sellers, 59s. 4d. Cleveland done at 51s. 4d., 51s. 7d, and 51s. 6½d. cash; also at 51s. 6d., 51s. 10d., and 51s. 9d. month; buyers 51s. 4½d. cash. Cumberland hematite done at 61s., 61s. 0½d., and 60s. 9d. cash; also at 61s., [61s. 3d., and 61s. month; buyers, 60s. 8d. cash. Middlesbrough hematite, buyers, 60s. 10½d. cash.

TYNE CHEMICAL REPORT.

Tuesday.

Chemicals are quiet, with a moderate demand, and there is practically no alteration in prices. Soda crystals are quoted at £2. 12s. 6d. per ton, gross weight, locally. Caustic soda, 76/77 %, £8, and 70 %, £7. per ton. Bleaching powder, £5. 5s. per ton. Sulphur, £4. 15s. per ton.

Bleaching powder, softs, £5. 10s. per ton, nett; do., hards, £5. 15s. per ton, nett; caustic soda: 76/77% £8., and 70% £7. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48% £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do, 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75°Tw., £2. 12s. 6d. per ton, nett; do., 100°Tw., £3. per ton, nett; do., 140°Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. 0d. per ton, nett; blanc fixe, £6. 10s. per ton nett; chloride of barium, refined crystals, £6. 15s. 0d. per ton, nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt is steady at 9s. 6d. per ton, f.o.b. Tees.

COALS.—The coal market is decidedly brisker, and higher prices are being asked. Coke is firmer, and the lowest quotation is now 25s. per ton, f.o.b. To-day's prices are:—Best Northumbrian small, 13s. to 13s. 6d. per ton; second qualities, 12s. to 12s. 6d. per ton; small steam, 7s. 6d. to 8s. per ton; bunker coals, 9s. to 10s. per ton; gas coals, 10s. 6d. to 11s. per ton; coke, very firm, 25s. to 26s. per ton.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, Tuesday.

The general market remains fairly active though without any conspicuous rise of values. Copper and lead products, however, are all to the firm side, and there is reported a scarcity in prussiate of potash. Sulphate of ammonia has behaved very steadily during the week, and to-day is firm on the spot at £11., f.o.b. Leith, while forward business has been booked at £10. 10s. and £10. 12s. 6d. The latter price is for delivery (in buyers' option) on to December if desirable. Bichromate of potash and bichromate of soda are steady at the combination prices now for some time ruling. In the mineral oil and paraffin industry there is just now the annual excitement due to the making up of books for the year on the part of three of the companies. One will certainly have something for the ordinary shareholders, but there is no certainty as to the others. Although products have been fetching better values, fuel, labour, etc., have all been higher. Burning oil is now into the dead season, and makers are stocking merely. There is the prospect of a slight rise by the time next season commences.

Chief prices current are:—Soda crystals, £2. 5s. to £2. 7s. 6d. basis nett, Tyne; soda ash, £4. 2s. 6d. to £4. 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 5s. to £4. 15s. nett, Glasgow; caustic soda, white, 74° £7. 7s. 6d., 70/72° £7., 60/62° £6., and cream 60/62° £6., all nett, Liverpool; bleaching powder, 35/37°, £5. 5s. to £5. 10s. nett, Tyne; saltcake, 30s.; borax, English refined, £16., and boracic acid, £26. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s., nett, Liverpool; bichromate of potash, 3½d., less 6% for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d., less 6% for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow); chlorate of potash, 3⅝d., less 5% Liverpool; nitrate of soda, 8s. 4½d. to 8s. 7½d.; sulphate of ammonia, £11. prompt, f.o.b., Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £25. 0s., less 5% Liverpool; paraffin scale, hard, 1⅞d. to 2d. per lb., and soft 2d. per lb.; paraffin wax, 120° semi-refined, 2¼d. to 2½d. per lb.; paraffin spirit (naphtha), 9d. to 9½d. per gal; paraffin oil (burning), No. 1, 6¼d.; and crystal, 6¾d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 15s. to £5. 5s., 885° £5. 10s. to £6., and 890/895° £6. 5s. to £6. 10s. Week's imports of sugar at Greenock were *nil*.

New Companies.

Swansea Compressed Gas Co., Ltd. – Capital £2,000. in £1. shares. This company has been formed to acquire the business of gas producing carried on at Cwmbrae, near Swansea, by T. Evans, to manufacture, compress and sell gases of all kinds. Registered office, 2, Major-street, Manselton, Swansea.

Tyne Acetylene and Carbide Co., Ltd.—Capital £10,000., in £1. shares. This company has been formed to manufacture and deal in acetylene gas appliances and carbide of calcium, and to acquire the business of the Northern Acetylene Gas and Curbide Co, Ltd. Registered office, 67, Westgate-road, Newcastle-on-Tyne.

Anglo-Greek Manganese Co., Ltd.—Capital £100,000. in £10. shares (2,000 £6. per cent. preference). This company has been formed to mine and smelt manganese ore or other minerals in Greece or elsewhere. The subscribers to the memorandum of association are:—T. Bradfield, 33, Pelham-road, Wood Green, N., cashier; B. Fuller, Ivydene, Woodside, Surrey, printer; F. C. Armitage, 5, Tanza-road, Hampstead, N.W., student; T. J. Worley, 39, Copleston-road, Denmark Park, S.E., secretary; A. Rickman, 13, Amity-street, West Ham Park, E., clerk; S. Richards, 14, Elliott-road, Thornton Heath, clerk; J. A. Innes, 160, Loughboro-road, S.W., stationer.

London Non-Flammable Wood Co., Ltd.—Capital £135,000. in £1. shares. This company has been formed to adopt an agreement with the British Non-Flammable Wood Co., Ltd., to treat timber so as to render it uninflammable, and to carry on the business of timber merchants, saw mill proprietors, wood workers, builders, contractors, etc. The subscribers to the memorandum of association are:—H. E. Warner, 10, Finsbury Circus, E.C.; solicitor; J. Fleay, 10, Finsbury Circus, E.C., solicitor; J. H. Newman, 7, Montagu-place, W.C, clerk; E. A. Lomas, 10, Finsbury Circus, E.C., clerk: E. R. Blackman, 10, Finsbury Circus, E.C., clerk; A. Howard, 17, Coleman-street, E.C., C.A.; F. S. Allen, 17, Goleman-street, E.C., clerk.

John Evison and Co., Ltd.—Capital £50,000. in £1. shares. This company has been formed to acquire the business carried on by J. Evison at Ramsey, Hunts, to adopt an agreement with G. Keeble, and to manufacture, import, export, buy, and sell artificial manures, feeding stuffs, fertilisers, and chemicals. The subscribers to the memorandum of association are:—J. Evison, Ramsey, Hunts, chemical manure manufacturer; G. Keeble, Thorpe-road, Peterborough, merchant; A. J. Keeble, Park-road, Peterborough, merchant; J. U. Keeble, Thorpe-road, Peterborough, merchant; A. C. Davis, Shepreth, Cambs., manager; Miss E. Keeble, Westwood House, Peterborough; R. Sturton, Park-road, Peterborough, clerk; H. B. Hartley, Peterborough, solicitor.

Desrumaux's Automatic Water Softener and Purifier, Ltd.—Capital £75,000. in £1. shares. This company has been formed to acquire certain British patents in relation to the inventions of H. Desrumaux, to adopt an agreement with W. Parker, and to carry on the business of manufacturers of, suppliers of purified waters, purifiers of waste liquors, manufacturers of apparatus and machinery for softening, hardening, purifying, or filtering water, chemists, druggists, etc. The subscribers to the memorandum of association are:—T. B. Cawthra, 15, Retford-place, Bradford, clerk; E. W. Townend, 16, Hal Ings, Bradford, stockbroker; J. T. Norman, Avalon, Putney Common S.W., chemist; H. E. Tankard, Menston, near Leeds, wool merchant; J. T. Schofield, 13, Grantham terrace, Bradford, cashier; G. F. Whitworth; 15, Bridge-street, Bradford, C.A.; L. Farrar, 1, Grandsmere-place, Halifax, salesman.

Gazette Notices.

PARTNERSHIPS DISSOLVED.

P. G. Shadbolt and J. V. M. King, cement manufacturers, Harefield, Middlesex and elsewhere, under the style of Coles, Shadbolt, and Co.

A., J. H., W. L., and E. Holmes, Newcastle-on-Tyne, paint and colour manufacturers, under the style of W. H. Holmes and Sons, as far as regards W. H Holmes.

E. J. E. Marten, F. T. T. Reynolds, and P. Cryer, drysalters, Manchester, under the style of Milward and Co., as far as regards E. J. E. Marten.

G. Raybould, J. Whitehouse, and W. Brookes, under the style of Raybould, Whitehouse, Brookes, and Co., Dudley, and elsewhere, chemists and drysalters, so far as regards W. Brookes.

IMPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.

Week ending April 15th.

Acetate of Lime—
U. States, 530 pks. Gillespie Brs. & Co.

Acetic Acid—
Belgium, 26 pks. Leach & Co.
Holland, 50 R. W. Greeff & Co.

Acetone—
Austria, 20 dms. E. Catlin
" 21 D. T. Domeier & Co.
Germany, 2 R. W. Greeff & Co.
France, 22 E Catlin
Holland, 2 cks. Becker & Wagner

Alkali—
France, 438 c. J. Harrison

Alum—
Holland, 474 pks. J. White

Ammonium Muriate—
Holland, 7 cks. H. Lorenz

Antimony Ore—
Germany, 38 t. R. H. Annison

Arsenic—
Portugal, 90 pks. Coverley & Westray

Barium Sulphate—
Belgium, 43 pks. J L. Lyon & Co.

Barytes—
Holland, 210 pks. W. Harrison & Co.
Germany, 22 "
Belgium, 183 "
Germany, 19 Duggen, Neel & Co,
Holland, 22 Union L. Co, Ld.
Germany, 11 R. W. Greeff & Co.

Bones—
Brisbane, 81 t. Goad, Rigg & Co
Sydney, 8 G. S. Yuill & Co

Bromide—
Germany, 202 cs. A. & M Zimmermann
1 ck.

Caoutchouc—
E. Indies, 18 c. L. & I. D. Jt. Co.
Rangoon, 46 "
P. E. Africa, 50 "
Straits, 28 "
Germany, 14 "
France, 30 Procter Brs.
Germany, 40 V. C. Christensen
" 3 Major & Field
Sydney, 2 McIlwraith, McEacharn & Co.
Germany, 58 Butler's Wf., Ld.
" 13 Stiebel Brs.
P. E. Africa, 30 Hale & Son
Nicaragua, 1 "
Zanzibar, 18 "
Germany, 22 Prop. Bull Wf.
Belgium, 22 T. Ronaldson & Co.
Zanzibar, 151 L. & I. D. Jt. Co.
Borneo, 50 Elkan & Co.
France, 46 H. Johnson & Sons

Castor Oil—
France, 56 cks. L. & I. D. Jt. Co.
" 1 Wainwright Brs. & Co.
Italy, 40 cs. C. C. Wf. Co., Ld.
Belgium, 6 cks. Frendenthal & Co.
" 20 brls. A. Brown & Co.
" 50 C. & E. Morton

Caustic Potash—
Germany, 41 dms. J. M. Steel & Co.
" 8 C. Christophersen & Co.

Chemicals *(otherwise undescribed)*
France, £6 J. Harrison
Holland, 80 H. Harkness
Belgium, 141 T. Palmer
Germany, 45 R. W. Greeff & Co.
" 28 Butler's Wf., Ld.
" 63 H. Lambert
" 276 L. & I. D. Jt. Co.
Denmark, 29 Crosse & Blackwell
Belgium, 200 T. Ronaldson & Co.
U. States, 150 F. Nicholson
France, 81 Mory & Co.
Sweden, 10 M. D. Co.
Holland, 35 T. H. Lee
" 42 Phillipps & Graves
Belgium, 70 John Cockerill Line
Germany, 322 A. & M. Zimmermann
" 69 Argo S. S. Co.
Spain, 15 J. Hall, Junr.
Holland, 20 Hernu, Peron & Co.

Citrate Lime—
Italy, 44 cks. Thames S. T. & L.
" 24 W. C. Bacon & Co.

Citric Acid—
Germany, 40 pks. A. & M. Zimmermann

Coal Products—
Carbolic Acid
Germany, 75 pks. J. G. Back
Pitch
N. Russia, 100 brls. Matthews & Luff
U. States, 33 cks. F. Gardner
Tar
N. Russia, 24 brls. Mordaunt Brs.
" 6 M. D. Co.
" 50 W. Beard & Co.
" 636 Linck, Moeller & Co.
U. States, 150 Lon. & Til. Ltge. C. & D. Co., Ld.

Cream of Tartar—
Italy, 27 cks. B. Jacob & Sons
France, 7 C. Atkins & Nisbet
" 5 Vokins & Co., Ld.
" 5 pks. J. W. Cook & Co., Ld.
" 5 M. Ashby, Ld.
" 10 cks. 20 W. C. Bacon & Co
" 3 cks. H. Johnson & Sons
Holland, 4 H. Harkness

Dyestuffs—
Argols
Italy, 50 pks. Thames S. T. & L. Co., Ld.
Cutch
U. States, 747 bxs. A. Howden & Co.
Rangoon, 1,000 L. & I. D. Jt. Co.
" 500 Leach & Co.
" 10 H A. Litchfield & Co.
U. States, 175 pks. "
Straits, 50 bxs. J. Swire & Sons
Extracts
Austria, 50 cks. Hoare, Wilson & Co.
" 102 Fellows, Morton & Co.
U. States, 12 J. W. & T. A. Smith
France, 220 brls. Union L. Co., Ld.
" 200 cs. Netherlands S.S. Co.
Denmark, 2 cks. M. D. Co.
France, 1 Burnett Brs. & Sons
" 30 pks. L. J. Levinstein & Sons
" 1 Prop. Hay's Wf.
Austria, 250 Boutcher, Mortimore & Co.
Germany, 120 Butler's Wf., Ld.
France, 135 B. & F. Wf. Co., Ld.
U. States, 100 Skilbeck Brs.
Gambier
Straits, 435 bgs. Brinkmann & Co.
Indigo
E. Indies, 121 chts. J. Karpeles & Co.
" 3 Kaltenbach & Schmitz
" 187 L. & I. D. Jt. Co.
" 9 Arbuthnot, Latham & Co.
" 194 J. Finley & Co.
" 48 pks. J. W. Cook & Co.,
Colon, 8 srns. Lazard Bros. & Co.
" 43 Chalmers, Guthrie & Co.
Nicaragua, 25 L. & I. D. Jt. Co.
E. Indies, 9 chts. Schonlank, Engel & Co.
" 12 Elkan & Co.
" 8 Wallace Bros
" 52 P. & O. Co
Germany, 17 cs. Butler's Wf., Ld.
Madder
Holland, 6 cks. J. Barber & Co.
Myrabolams
E. Indies, 600 bxs. J. Graves
" 1,350 pks. Culverwell, Brookes & Co.
Saffron
Spain, 1 cs. Nichs. Wvs, Ld.
Shumac
France, 51 bgs. L. & I. D. Jt. Co.
Tanners' Bark
Natal, 65 t. A. & W. Nesbitt
" 26 Boutcher, Mortimore & Co.
" 23 J. T. Rennie, Son & Co.
Belgium, 51 F. A. Hughes
Tumeric
Germany, 25 bgs. H. Grey, Junr.
E Indies, 180 pks. Dalton & Young

Dyestuffs *(otherwise undescribed)*
France, 6 pks. Bennett S. S. Co.
U. States, 1 F. Christy & Co.

Farina—
U. States, 200 sks. R. Bennett & Co.
Sydney, 9 cks. Montgomerie & Workman
U. States, 500 bgs. R. G. Hall & Co.
Germany, 100 J. Barber & Co.
" 6 bls. Butler's Wf., Ld.
Belgium, 4 pks. John Cockerill Line
U. States, 74 Wingate & Johnson
" 50 R. & W. Davidson
France, 5 T. Trapp & Sons

Glucose—
U. States, 8,100 pks. 16,068 c. R. G. Hall
" 500 500 Trier, Meyer & Co.
" 500 530 Vokins & Co.,
" 1,000 1,000 C. Mangold
" 2,000 2,000 G. Clarke
" 160 160 L. & I. D. Jt. Co.
" 100 616 C. Barnard
" 760 4,490 W. Grose

Glue—
France, £144 Lon. & Til. C. & D. Co, Ld.
" 61 W. Sandover & Co.
" 220 D. Magnus
Holland, 300 M. H. Voss
Italy, 502 T. J. & T. Powell
Germany, 70 Becker & Wagner
" 59 Butler's Wf., Ld.
France, 865 T. M. Duche & Sons
" 180 Burnett Brs. & Sons
" 54 J. Harrison
Germany, 80 J. Barber & Co.
Holland, 45 A. G. Robinson & Co.
France, 140 W. J. Davies & Sons
Austria, 150 "
" 150 Bellamy's Wf., Ld.
Italy, 32 D. Magnus
Germany, 180 L. & I. D. Jt. Co.
Holland, 600 Netherlands S. S. Co.
" 80 T. H. Lee
Belgium, 537 T. M. Duche & Sons

Gutta Percha—
B. Guiana, 2 c. Major & Field
Straits, 193 L. & I. D. Jt. Co.

Kainit—
Germany, 50 t. F. W. Berk & Co.,

Lead Acetate—
Germany, £120 F. Boehm
" 168 Butler's Wf., Ld.

Litharge—
Germany, 4 cks. H. Lambert

Manure—
E. Indies, 250 t. L. & I. D. Jt. Co.
" 250 Munro & Liddells
" 200 McDougall & Bronthron
" 34 A. Hunter & Co.
Belgium, 3 G. A. Price
Germany, 50 F. W. Berk & Co., Ld.
S. Russia, 50 Lawes Chemical Manure Co.
Holland, 50 Hollinghurst & Co.

Methyl Alcohol—
Germany, 32 dms. W. Izzard
France, 3 Lister & Biggs

Molasses—
U. States, 350 cks. 1,951 c. J. Forsey
" 5 30 Davies, Turner, & Co.
" 403 2,476 J. R. Francis & Co., Ld.
" 50 200 E. & T. Pink
" 50 275 Ohlenschlager Brs.
" 450 2,508 G. Hornzee
" 400 2,560 Deering & Robottom

Ochre—
France, 42 cks. Burrell & Co.
Holland, 38 pks. Phillipps & Graves
U. States, 91 brls. Furness, Withy, & Co.
" 92 L. & I. D. Jt. Co.
Italy, 11 pks T. & W. Farmiloe

Paraffin Wax—
U. States, 575 cs. Anglo-American Oil Co.

Phosphates—
U. States, 845 t. Wyllie, Ward, & Co.
Belgium, 4 J. E. Kitton
W. Indies, 345 G. M. Bauer
France, 300 W. E. Cole

Potash—
U. States, 6 t. S. Ward & Co.
Germany, 54 kgs. R. W. Greeff & Co.
" 20 Butler's Wf., Ld.

Potassium Bichromate—
Germany, 60 cks. J. W. Cook & Co.,

Potassium Carbonate—
Germany, 18 c. H. Lambert
" 100 Petri Brs.

Potassium Muriate—
Germany, 200 bgs. Anglo-Contl. Guano Works
" 508 Bessler, Waechter,

Potassium Oxalate—
Norway, 10 pks. S C. Dk. Co.

Potassium Oxymuriate—
Sweden, 30 cs. 200 kgs. 4 cks. G. Boor & Co.

Potassium Permanganate—
Belgium, 5 pks. T. Ronaldson & Co.

Potassium Sulphate—
Germany, 150 bgs. Bessler, Waechter,

Pyrogallic Acid—
Germany, 7 pks. Butler's Wf., Ld.

Red Lead—
Germany, 11 cks. J. Barber & Co.
Holland, 32 D. Storer & Sons

Rosin—
France, 3 cks. R. James & Co.
" 100 brls. J. Watt & Son

Salacetos—
Norway, 14 pks. S. C. Dk. Co.

Saltpetre—
Germany, 200 kgs. Lucas & Spencer's Wf.
" 63 cks P. Hecker & Co.
E. Indies, 1,238 bgs. Lucas & Spencer's Wf.

Salicylic Acid—
Germany, 2 pks. Butler's Wf., Ld.

Soda—
Austria, 5 t. J. Norrenberg & Co.
Holland, 5 R. W. Greeff & Co.

Sodium Hypochlorite—
Germany, 300 cs. H. Lambert
Holland, 7 t. R W. Greeff & Co.

Sodium Nitrate—
——— 20,082 bgs. W. Montgomery

Sodium Phosphate—
Belgium, 20 pks. A. Boake Roberts & Co.

Sodium Sulphate—
E. Turkey, 30 cks. H. Wallace & Co.
Belgium, 20 pks. Deering & Robotton

Starch—
Germany, 420 cs. Horne & Co.
" 117 pks. Argo S. S. Co.
U. States, 1,000 J. Forsey
" 5,600 bgs. "
" 2,398 pks. Union L. Co., Ld.
" 240 C. Tennant, Sons & Co.
600 bgs.
" 1,300 R. G. Hall & Co.
" 1,100 pks. "
Holland, 55 G. S. N. Co.
" 33 Phillipps & Graves
" 1,000 D. R. Wall
" 1,981 Little & Johnston
" 670 cs. "
" 40 pks. Hernu, Peron & Co.
Belgium, 110 T. Ronaldson & Co.
" 175 T. H. Lee
" 40 J. Harrison
" 117 Leach & Co.
" 19 cs. "
" 220 Becker & Wagner
" 80 C. Tennant, Sons & Co.
France, 232 F. Claydon & Co.
" 40 J. Barber & Co.
" 40 pks. G. E. Barne

Stearine—
Belgium, 468 bgs. H. Hill & Son
" 50 D. C. Thomas & Son
" 18 cks. C. Price & Co.
Holland, 68 bgs. H. Hill & Son

Sulphur—
Sydney, 35 t. Hicks, Nash, & Co.
Italy, 100 W. C. Bacon & Co.

Superphosphates—
Belgium, 13 t. Chemical Work (Late H. & E. Albert)

Tallow—
Sydney, 79 cks. H. Hill & Son
" 30 Aust. Meat Co.
" 152 G. S. Yuill & Co.
" 159 Bessler, Waechter & Co.
" 258 Deering & Robottom
" 261 W. France & Co., Ld.
" 365 Elkan & Co.
" 76 J. W Cook & Co., Ld.
" 38 Culverwell, Brookes & Co.

,, 242 Hoare, Wilson, & Co.
,, 122 Perkins & Homer
,, 459 J. R. Francis & Co.
,, 42 A. B. Curtis & Co.
,, 262 Goad, Rigg, & Co.
,, 189 Beresford & Co.
,, 346 J. Greig
,, 5,332 Phillipps & Graves
Queensland, 1 Dalgety & Co., Ld.
,, 247 Elkan & Co.
,, 120 W. France & Co., Ld.
,, 310 Phillipps & Graves
France, 11 C. S. Lovell
,, 57 bgs. Orient Co., Ld.
N.S.W., 34 cks. J. W. Cook & Co., Ld.
N. Zealand, 5 Culverwell, Brooks, & Co
,, 55 Dalgety & Co., Ld.
,, 35 Brown & Elmslie
,, 3 N. M. & A. Co.
,, 77 Goad, Rigg, & Co.
Gibraltar, 12 brls. Beresford & Co.
Germany, 125 t. C. S. Lovell
Melbourne, 63 cks. Mordaunt Brs.
,, 115 J. R. Francis & Co.
,, 65 Dalgety & Co., Ld.

Tartaric Acid—
Holland, 36 pks. Kirkpatrick, Barr, & Co.
,, 17 F. C. Devon & Co.
Belgium, 12 B. & F. Wf. Co., Ld.

Ultramarine—
Holland, 2 pks. Becker & Wagner
,, 2 Phillipps & Graves
Belgium, 10 W. Harrison & Co.

Varnish—
U. States, 71 pks. Taylor Brs.
,, 13 Atlantic Transport Co.
,, 6 Dawson Brs.
,, 20 L. & N.-W. Rly. Co.
Germany, 14 Butler's Wf., Ld.

Verdigris—
France, 21 pks. B. & F. Wf. Co., Ld.

Waste Salt—
Germany, 90 t. F. W. Berk & Co., Ld.

White Lead—
Germany, 24 cks. W. A. Rose & Co.
Holland, 15 Randall Brs.
,, 39 pks. W. Balchin, Ld.
,, 20 Kerestiji & Co.
Austria, 8 M. Dk. Co.
Belgium, 37 J. L. Lyon & Co.
,, 40 Burrell & Co.
,, 47 brls. T. & W. Farmiloe, Ld.

Wolfram Ore—
Australia, 1 t. H. Bath & Son

Wood Pulp—
U. States, 9,104 pks. Henderson, Craig, & Co.
,, 53 W. G. Taylor & Co., Ld.
Norway, 3,300 London Paper Mills Co.
,, 800 J. Sharp
Sweden, 10 t. L. & N.-W. R. Co.
,, 400 pks. Alsing & Co., Ld.
,, 400 M. Dk. Co.
Germany, 2,237 ,,
,, 27 Butler's Wf., Ld.
,, 1,016 Henderson, Craig, & Co.
Canada, 1,700 Becker & Co.
Belgium, 1,926 J. Harrison
Holland, 400 M. H. Voss
,, 301 A. E. Reed & Co

Zinc Oxide—
Holland, 20 brls. M. Ashby, Ld.
U. States, 520 pks. ,,
Germany, 500 Soundy & Sons
Belgium, 5 Wilson & Co.

Zinc Sulphate—
Germany, 34 cks. F. Smith

Zinc White—
Holland, 20 pks. J. Barber & Co.
,, 20 R. W. Greeff & Co.

LIVERPOOL.

Week ending April 15th.

Acetate of Lime—
New York, 1,540 bgs.

Aluminium—
New York, 17 cs.

Ammonia—
Boston, 100 cyldrs. J. Simpson & Co.

Ammonium Nitrate—
Antwerp, 75 brls.

Antimony—
Antofagasta, 128 bgs. A. Gibbs & Sons

Barytes—
Antwerp, 101 bgs.
Rotterdam, 49 45 cks.

Bones—
Cadiz, 160 sks.
Alexandria, 399 bgs.

Castor Oil—
Marseilles, 23 cks. 32 brls.
Calcutta, 399 cs. Ralli Bros.

Chemicals *(otherwise undescribed)*
Hamburg, 75 bgs.

Coal Products—
Pitch
Marseilles, 113 brls.

Colours—
Rotterdam, 19 cs.

Cottonseed Oil—
Baltimore, 250 brls.

Cream of Tartar—
Barcelona, 3 pks. T. & L. Sitzler
Bordeaux, 53 cks.

Dried Blood—
Baltimore, 560 bgs. H. J. Baker & Bro.

Dyestuffs—
Cutch
New York, 500 bgs. 10 cs.
Singapore, 1,000 bxs.
Extracts
New York, 100 brls.
Fiume, 544
St. Nazaire, 360 cks.
Rouen, 200
Nantes, 200
Bordeaux, 491 J. R. Francis & Co.
Indigo
Calcutta, 10 chts. 1 bx.

Glucose—
New York, 50 brls.
Newport News, 750
Baltimore, 250

Glue—
St. Nazaire, 34 cks.
Dunkirk, 200 bgs.
Rotterdam, 140
Antwerp, 3 cks.

Glycerine—
Gothenburg, 1 cs. G. Scott & Son

Linseed Oil—
Amsterdam, 30 brls.

Litharge—
Hamburg, 3 cks.

Lithopone—
Hamburg, 8 cks.

Manganese Ore—
Poti, 2,465 t. J. Gardner & Sons
Coquimbo, 360
Hamburg, 3 cks.

Manure—
Bombay, 1,000 bgs. W. & R. Graham & Co.
,, 225
Karachi, 9,941 pks.

Molasses—
N. Orleans, 600 brls.
Alexandria, 950 cks.

Myrabolams—
Bombay, 1,250 bgs. E. Sassoon & Co.
,, 918 E. D. Sassoon
,, 3,297 & Co.

Ochre—
Marseilles, 95 cks.

Paint—
Antwerp, 2 cks.
Boston, 12 cs.

Phosphates—
Antwerp, 2,000 bgs.
Ghent, 1,000 1,300 t.

Phosphorus—
Portland, 100 cs.

Potash—
Rotterdam, 4 cks.
Rouen, 106

Potassium Prussiate—
Bordeaux, 24 cks.
Marseilles, 19 brls.

Pyrites—
Huelva, 2,076 t. Mathieson & Co.

Red Lead—
Rotterdam, 52 cks.

Rosin—
Boston, 250 brls.
Marseilles, 3 cs.

Saltpetre—
Calcutta, 1,134 bgs. Ralli Brs.
Karachi, 132
Hamburg, 25 cks.

Soap—
Marseilles, 1 cs. M. Bell
Bari, 193
New York, 262 brls.
Newport News, 100 bxs. H. A Lane & Co.
Marseilles, 90 cks. 60 43 cs. 50 dms.
New York, 4 bxs. Lorimer & Co.

Soap Stock—
New York, 1,461 brls.

Soapstone—
Bordeaux, 200 bgs.

Sodium Nitrate—
Pisagua, 9,684 bgs. Primitiva Nitrate Co., Ld.

Starch—
N'port News, 1,200 sks.
Hamburg, 204 cs.
Antwerp, 1,310
,, 149 J. T. Fletcher & Co.
Rotterdam, 20 Brown, Geveke & Co.
New York, 11 brls.

Stearine—
Antwerp, 13 bgs.
Rouen, 58

Tallow—
New York, 325 tcs. Colby & Co.
N. Orleans, 50
Pensacola, 235 J. Thallon
Boston, 390
Baltimore, 150
B. Ayres, 199 cks. R. P. F. Meat Co.

Tannin Extract—
Marseilles, 100 cks.

Tartar—
Ancona, 3 cks.

Tartaric Acid—
Marseilles, 24 cks.
Hamburg, 5

Ultramarine—
Rotterdam, 16 cks.
Hamburg, 8

Verdigris—
Marseilles, 3 cks. M. Bell
,, 3

Waste Salt—
Hamburg, 1,000 bgs. 50 t.

White Lead—
Rotterdam, 39 cks.
Antwerp, 12

Wood Pulp—
Boston, 725 bdls. Lever Bros., Ld.
Portland, M., 1,738 bls.
Rotterdam, 13
Gothenburg, 22 R. L. Lundgreu
,, 22 sks. G. Schinkenwald & Co.

Zinc Oxide—
Antwerp, 40 brls 248 dms.

MANCHESTER.

Week ending April 15th.

Barytes—
Hamburg, 54 cks.
Rotterdam, 50 bgs.

Beta Naphthol—
Rotterdam, 2 cks.

Boracic Acid—
Hamburg, 2 cks.

Caustic Potash—
Hamburg, 2 cs.

Chemicals *(otherwise undescribed)*
Antwerp, 2 cks.

Coal Products—
Alizarine
Rotterdam, 65 cks.
Aniline Salt
Rotterdam, 10 cks.
Pitch
Hamburg, 11 cks.

Colours—
Hamburg, 11 cs. / 14 cks.
Rotterdam, 30 12 brls. / 11 cs.

Dyestuffs—
Extract
Boston, 10 brls.
Shumac
Palermo, 300 bgs. 450 bls.
Tannin
Hamburg, 10 cs.

Farina—
Stettin, 2,502 bgs. Browne, Geveke, & Co.
,, 500

Glucose—
Boston, 103 brls.
Stettin, 1,000 bgs. / 104 cks.

Glue—
Hamburg, 52 bgs.
Rotterdam, 121

Lead Acetate—
Antwerp, 14 cks.
Hamburg, 24

Lithopone—
Rotterdam, 20 cks.

Potash—
Hamburg, 19 cks.

Red Lead—
Rotterdam, 16 cks.

Starch—
Antwerp, 365 cs.
Boston, 1,850 bgs.
Rotterdam, 60

Stearine—
Rotterdam, 13 bls.

Tartar—
Hamburg, 10 kgs. / 6 cks.

Tartar Emetic—
Hamburg, 6 cks.

Tartaric Acid—
Rotterdam, 10 cks.

Waste Salt—
Hamburg, qty.

Wood Pulp—
Boston, 401 bls. 35 cs.
Gothenburg, 4,240 266 bdls.
Hamburg, 163 270 pks.
Sarpsborg, 2,172 Kellner, Partington P. P. Co., Ld.
,, 1,600 Christopherson, Andrews, & Co.

Zinc White—
Rotterdam, 50 cks.

HULL.

Week ending April 15th.

Acids—
Bari, 104 cks. Wilson, Sons, & Co., Ld.
Rotterdam, 4 Hull & Netherlands S. S. Co.

Antimony—
Hamburg, 15 cs. Wilson, Sons, & Co., Ld.

Antimony Salt—
Bremen, 2 cs. Veltmann & Co.

Barytes—
Amsterdam, 29 cks. Hull & Netherlands S. S. Co.
Antwerp, 34 H. F. Pudsey
,, 50
Bremen, 44 J. Pyefinch & Co.
,, 100 bgs. Storry, Smithson, & Co.
Rotterdam, 64 cks. Hull & Netherlands S. S. Co.

Chemicals *(otherwise undescribed)*
Antwerp, 2 cks. Bailey & Leetham, Ld.
Bremen, 1 cs. J. Pyefinch & Co.
Dunkirk, 10 bgs.
Hamburg, 8 cks. Wilson, Sons, & Co., Ld.
,, 2

Coal Products—
Alizarine
Rotterdam, 55 pks. Hull & Netherlands S. S. Co.
Aniline
Rotterdam, 35 pks. Hull & Netherlands S. S. Co.
Pitch
Rotterdam, 320 cks. Hull & Netherlands S. S. Co.
Tar
Konigsberg, 60 brls. Bailey & Leetham, Ld.
,, 150

Colours—
Antwerp, 3 brls. / 1 cs. / 4 cks. Wilson, Sons, & Co., Ld.
Christiania, 8 ,,
Danzig, 10 ,,
Ghent, 8
Hamburg, 39 6 cs.
Riga, 528 brls. ,,

Rotterdam, { 20 bgs. 2 cs. 14 brls. Hull & Netherlands S. S. Co.
Stettin, 25 cks. Wilson, Sons, & Co., Ld.

Cream of Tartar—
Bordeaux, 1 ck.
Rotterdam, 2 Hull & Netherlands S. S. Co.

Dyestuffs—
Extract
Bordeaux, 30 cks.
Dunkirk, 50 Wilson, Sons, & Co., Ld.
Fiume, 20 brls. ,,
,, 125
Hamburg, 15 ,,
Riga, 200 cs. ,,
Rouen, 90 cks. ,,
Trieste, 5 brls. ,,
Indigo
Rotterdam, 7 brls. Hull & Netherlands S. S. Co.
Shumac
Palermo, 300 bgs.
Trieste, 460 Wilson, Sons, & Co., Ld.

Farina—
Antwerp, 25 bgs. Wilson, Sons, & Co., Ld.
Ghent, 11 ,,
Harlingen, 100 bls. Hull & Netherlands S. S. Co.
Stettin, 270 bgs.

Glucose—
New York, 1,100 brls.

Glue—
Christiansund, 1 ck. Wilson, Sons, & Co., Ld.
Hamburg, 90 bgs.
Rotterdam, 10 Hull & Netherlands S. S. Co.
Rouen, 29 pks.

Lead Nitrate—
Amsterdam, 2 cks. Hull & Netherlands S. S. Co.

Linseed Oil—
Amsterdam, 200 brls. Hull & Netherlands S. S. Co.

Litharge—
Amsterdam, 15 cks. Hull & Netherlands S. S. Co.

Logwood Extract—
New York, 50 bxs. Wilson, Sons, & Co., Ld.

Ochre—
Dunkirk, 9 cks. Wilson, Sons. & Co., Ld.
Rouen, 31

Paraffin Wax—
New York, 100 brls. Wilson, lands S. S. Co.
,, 150

Phosphates—
Ghent, 200 t.
Dunkirk, 150

Potash—
Antwerp, 18 cks. Wilson, Sons, & Co., Ld.
Dunkirk, 18 ,,
Hamburg, 21 dms. Bailey & Leetham, Ld.
70 bgs.
New York, 6 brls.

Rosin—
Savannah, 4,155 brls.

Saltpetre—
Antwerp, 135 bgs.
Hamburg, 100 cks. Wilson, Sons, & Co., Ld.

Soap—
Bari, 13 cs.

Soda—
Antwerp, 100 bgs. Wilson, Sons, & Co., Ld.
Fiume, 50 brls. ,,
,, 50
Ghent, 100 bgs.
Rotterdam, 18 cks. Hull & Netherlands S. S. Co.

Starch—
Amsterdam, 40 bgs. Hull & Netherlands S. S. Co.
120 cs.
Antwerp, 260 J. Hall & Sons
Bremen, 2,371 Veltmann & Co.
Ghent, 82 Wilson, Sons, & Co., Ld.

Stearine—
Antwerp, 57 bgs. Wilson, Sons, & Co., Ld.

Tallow—
Dunkirk, 261 cks. Wilson, Sons, & Co., Ld.

Tartar—
Molletta, 2 cks. Wilson, Sons, & Co., Ld.

Tartaric Acid—
Rotterdam, 8 cks. Hull & Netherlands S. S. Co.

Turpentine—
Bordeaux, 14 cks.

Ultramarine—
Rotterdam, 20 cks. Hull & Netherlands S. S. Co.

Vitriol—
Hamburg, 132 cks. Wilson, Sons, & Co., Ld.

Waste Salt—
Hamburg, 500 bgs. Bailey& Leetham, Ld.
50 t.
,, 1,160 bgs.

White Lead—
Amsterdam, 25 cks. Hull & Netherlands S. S. Co.
Antwerp, 50 Bailey & Leetham, Ld.
Rotterdam, 125 Hull & Netherlands S. S. Co.

Wood Pulp—
Bergen, 280 pks. Wilson, Sons, & Co., Ld.
Christiania, 3,138 bls. ,,
Drontheim, 556 ,,
Gothenburg, 80 ,,
Hamburg, 200 pks. Bailey & Leetham, Ld.
Hango, 52 bls. J. Good & Sons
90

Zinc White—
Rotterdam, 10 cks. Hull & Netherlands S. S. Co.

GLASGOW.

Week ending April 20th.

Barytes—
Hamburg, 43 cks 50 bgs.

Chemicals *(otherwise undescribed)*
Rotterdam, 1 cs. J. Rankine & Son

Coal Products—
Alizarine
Rotterdam, 21 cks. J. Rankine
19 brls. & Son
Aniline
Amsterdam, 2 cks. J. Rankine & Son
Rotterdam, 9 1 cs 6 bxs. ,,

Colours—
Rotterdam, 4 bxs. J. Rankine
25 brls.63 pks. & Son
Hamburg, 13 cks.

Cottonseed Oil—
Rotterdam, 42 brls. J. Rankine & Son

Cream of Tartar—
Barcelona, 32 cks.

Farina—
Delfszyhl, 300 bgs.

Glue—
Rotterdam, 51 bgs. J. Rankine & Son

Oxalic Acid—
Rotterdam, 10 cks. J. Rankine & Son

Phosphates—
Dunkirk, 1,000 bgs.

Potassium Oxalate—
Rotterdam, 10 cks. J. Rankine & Son

Saltpetre—
Hamburg, 5 cks.

Soap—
Rotterdam 10 cs. J. Rankine & Son

Soda—
Hamburg, 24 cks.

Sodium Nitrate—
Rotterdam, 19 cks. J. Rankine & Son

Starch—
Rotterdam, 40 cs. J. Rankine & Son

Waste Salt—
Hamburg, 125 cks.

White Lead—
Rotterdam, 8 cks. J. Rankine & Son

Wood Pulp—
Christiania, 643 bls.
Drammen, 750
Hamburg, 203

Zinc Oxide—
Hamburg, 50 cks.

TYNE.

Week ending April 15th.

Barytes—
Rotterdam, 100 bgs. Tyne S. S. Co.

Colours—
Antwerp, 2 cks. Tyne S. S. Co.
Hamburg, { 2 cs. 10 cks. ,,

Phosphates—
Bona, 800 t. Blaydon Chemical Co.

Starch—
Rotterdam, 42 cs. Tyne S. S. Co.

White Lead—
Antwerp, 20 brls. Tyne S. S. Co.

Wood Pulp—
Christiania, 1,708 bls.

GOOLE.

Week ending April 12th.

Alkali—
Calais, 1 ck.

Antimony—
Boulogne, 1 ck.

Barytes—
Rotterdam, 100 bgs.

Caoutchouc—
Boulogne, 10 cks.

Coal Products—
Alizarine
Antwerp, 30 brls.
Rotterdam, 15 cks. 1 cs.
Aniline
Rotterdam, { 45 cks. 12 cs.

Colours—
Hamburg, 36 cks. 5 cs.

Dyestuffs *(otherwise undes.)—*
Amsterdam, 3 cks.
Antwerp, 2
Boulogne, 7 161 pks.
Rotterdam, 2

Dyestuffs—
Extracts
Antwerp, 54 brls.
Logwood
Belize, 465 ,,

Farina—
Hamburg, 400 bgs.

Glue—
Antwerp, 8 cks.
Boulogne, 1 1 b.

Ochre—
Dunkirk, 75 cks.

Plumbago—
Boulogne, 1 ck.

Potash—
Calais, 4 dms

Pyrites—
Seville, 1,250 t.

Saltpetre—
Hamburg, 44 cks.
Rotterdam, 170 bgs.

Stearine—
Antwerp, 13 bgs.

Waste Salt—
Hamburg, { 152 cks. 100 t.

GRIMSBY.

Week ending April 15th.

Acids—
Antwerp, 2 bs. 1 dm.

Barytes—
Hamburg, 4 cks.

Caoutchouc—
Antwerp, 1 cs.
Hamburg, 1 bg.
Rotterdam, 2

Carbonic Acid Gas—
Rotterdam, 25 tubes

Chemicals *(otherwise undescribed)*
Hamburg, 1 ck. 3 pks.
Rotterdam 1 bkt.

Coal Products—
Aniline Dyes
Hamburg, 54 pks.

Colours—
Antwerp, 4 cks. 149 pks.
Hamburg, 21 cs. 96
Rotterdam, 40 bgs.

Glue—
Antwerp, 4 cs.
Dieppe, 24 cks. 20 bs.

Tallow—
Hamburg, 100 ks.

EXPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending April 19th.

Alkali—
Delagoa Bay, 1 t. £14
Mahe, 2 14 c. 25

Ammonia—
Montreal, 12 cks. £23
Brisbane, 1 t. 28
Demerara, 100cys.25 cs. 34
Durban, 5 15

Ammonia (Anhydrous)—
Cologne, 40 cyldrs. £110
Amsterdam, 4 13
Beira, 6 16

Ammonium Carbonate—
St. John's, Nf'd., 5 c. £12
Rouen, 5 t. 10 130
Cologne, 1 6 30
Rotterdam, 10cks.20 cs. 125
Sydney, 20 30

Ammonium Muriate—
Cologne, 17 cks. £96
Ghent, 7 38

Ammonium Sulphate—
Madras, 21 t. 8 c. £35
Antwerp, 70 770
Guadeloupe, 65 726
Hamburg, 21 231
Trinidad, 30 340
Dunkirk, 15 165

Amorph. Phosphorus—
Cape Town, 15 cs. £163

Barium Nitrate—
Madras, 6 kgs. £5

Borax—
Napier, 15 c. £16
Perth, 20 kgs. 17
E. London, 37 cs. 185
Rotterdam, 50 cks. 75

Carbonic Acid Gas—
Channel Is., 33 tubes £12

Caustic Potash—
Napier, 17 c. £36
Melbourne, 5 22
Durban, 4 5
Wellington, 10 14

Caustic Soda—
Fremantle, 7 c. £13
Napier, 6 t. 5 67
Singapore, 10 8
Auckland, 1 13
Delagoa Bay, 6 6
Durban, 2 34

Chemicals *(otherwise undescribed)*
Cape Town, 2 cs. £15
Rio de Janeiro, 15 kgs. 16
Lisbon, 1 43
Brisbane, 3 14
Melbourne, 25 51

Dunkirk, 21 dms. 75
Perth, 6 12
Brussels, 3 pks. 13
Dunedin, 60 65
Genoa, 20 120
Wellington, 2 8
Shanghai, 4 cks. 19
Auckland, 42 8
Boulogne, 4 45
Sydney, 25 2 23
Durban, 2 21
Antwerp, 16 237
B. Ayres, 36 61
Hamburg. { 18 kgs. 36 dms. / 230 pks. 246
Calcutta, 15 37
Paris, 49 139
Pt. Elizabeth, 9 36
Sydney, 39 23

Chloride of Lime—
Durban, 2 t. £17

Citric Acid—
Wellington, 3 c. £21
Antwerp, 6 39
Hamburg, 2 cks. 69
Durban, 1 7
Cape Town, 2 15
Colombo, 1 8
Lisbon, 5 36
Montreal, 1 t. 132

Coal Products—
Alizarine
Lyttelton, 12 pks. £177
Aniline
Boulogne, 2 cks. £14
Dunedin, 2 cs. 93
Benzine
Brisbane. 13 cs. 25 dms. £10
Carbolic Acid
Rouen, 24 cks. £38
Sydney, 39 pks. 8
Adelaide, 10 22
Durban, 4 brls. 50 dms. 18
Reval, 16 cs. 80
Coal Tar Dyes
St. John's, Nfd, 1 cs. £15
Boulogne, 1 ck. 11
Boston, 8 pks. 133
Creosote
Bordeaux, 832 cks. £632
Newport News, 800 513
New York, 300 173
Creosote Oil
Brest, 817 brls. £538
Bordeaux, 60 dms. 102
Creosote Salt
Philadelphia, 621 bgs. £173
Naphthaline
New York, 169 cks. £199
Pitch
Batavia, 10 brls. £5
Antwerp, 1,091 1,269
Alexandria, 150 37
Boston, 200 cks. 70
Galatz, 50 13
Haiphong, 560 270
New York, 20 25
Mauritius, 10 kgs. 7
Wiborg, 50 t. 61
Chantenay, 1,142 1,385
Pyridine
B. Ayres, 2 dms. £6
Tar
Madras, 10 rnlts. £7
Morlaix, 560 brls. 225
Delagoa Bay, 50 dms. 8
Durban, 2 cks. 7
Hamburg, 349 142
Mauritius, 10 5
Wiborg, 600 343

Coal Products (*otherwise undes.*)—
Amsterdam, 35 bxs. £55
Boulogne, 8 cks. 46
Durban, 325 dms. 18

Copper Sulphate—
Paris, 4 t. 19 c. £110
Syra 1 2 18

Cream of Tartar—
Wanganui, 3 c £12
Auckland, 42 pks. 78
Dunedin, 15 60
Brisbane. 7 22
Launceston, 5 20
Wellington, 1 t. 11 122
Bowen, 4 16

Disinfectants—
St. John's, Nf'd, 7 cs. £25
Auckland, 16 pks. 29
Hong Kong, 13 7
Pt. Elizabeth, 6 140 dms. 82
Penang, 5 cks. 575 322
Calcutta, 100 1 1,000 132
Shanghai, 5 8
Durban 80 kgs. 175 62
Singapore, 146 pks. 120 72
Sydney, 16 60
Canterbury, 5 14

Dried Blood—
New York, 3 t. £118

Gypsum—
Lyttelton, 2 t. 8 c. £15

Manure—
Jamaica, 40 t. £320
Jersey 89 15 c. 261
Morlaix, 138 5 500
Bordeaux, 20 55
Martinique, 25 300
San Francisco, 4 9 36
Bundaberg, 20 2 296
Guadeloupe, 311 3,110
Cherbourg, 105 157
Mauritius, 28 400
Grenada, 6 16 75
Durban, 2 13
Gothenburg, 68 19 190
Antwerp, 9 81
Barbadoes, 50 500

Nitric Acid—
Channel Is., 14 cys. £28
Madras, 1 t. 10 c. 15

Oxygen—
Amsterdam, 1 cs. £16

Potassium Bichromate—
Lyttelton, 1 t. 2 c. £33

Potassium Chlorate—
Madras, 8 c. £13
Brussels, 4 7
Auckland, 4 8
Batoum, 5 kgs. 10
Lisbon, 11 18

Potassium Cyanide—
Durban, 3 t. 26 cs. £638
Delagoa Bay, 13 1,210
Melbourne, 6 c. 28
Auckland, 5 502

Potassium Muriate—
Guadeloupe, 10 t. £100

Salammoniac—
Cape Town, 1 t. £30
Hamburg, 3 2 c. 37

Saltpetre—
Hamilton, Ont., 6 t. 12 c. £120
Gibraltar, 15 293
Bahia, 4 14 103

Sheep Dip—
Durban, 4 c. £10
N. Orleans, 500 dms. 110
Sydney, 2 t. 12 40
B. Ayres, 15 4 375
Napier, 2 16 50

Soda—
Singapore, 1 t. £4
Melbourne, 2 13 c. 51
Rotterdam, 5 9 30

Sodium Bicarbonate—
Christiania, 19 c. £8
Sydney, 2 5
Trinidad, 1 t. 7

Sodium Bisulphite—
Lyttelton, 3 t. 13 c. £20

Sodium Nitrate—
Grenada, 2 t. 14 c. £19

Sodium Silicate—
Auckland, 9 t. 18 c. £55

Sodium Sulphate—
Ghent, 60 t. £90

Strontium Nitrate—
Madras, 6 kgs. £8
Calcutta, 1 t. 23

Sulphur—
Madeira, 7 t. 7 c. £70
Perth, 1 10 13
Lisbon, 350 brls. 243

Sulphuric Acid—
Colombo, 1 t. 10 c. £20
Madras, 18 10
Cape Town, 3 27

Superphosphates—
Guadeloupe, 80 t. £240
Sydney, 25 81
Madras, 51 219
Trinidad, 30 103

Tartaric Acid—
Wellington, 4 c. £23
Fremantle, 2 13
Bombay, 8 47

LIVERPOOL.

Week ending April 19th.

Acetic Acid—
Lisbon, 5 cks. 10 brls. £26
Passages, 15 c. 19

Alum—
Johannesburg, 5 c. £2
Maranham, 10 3
Galatz, 8 t. 8 3 q. 42

Alumina Sulphate—
Santos, 6 c. 2 q. £2

Ammonia (Anhydrous)—
Lisbon, 1 cs. £4

Ammonium Carbonate—
New York, 2 t. 10 c. £69
Hamburg, 10 1 q. 15
Stettin, 10 3 15
Ceara, 2 cks. 8
Genoa, 10 kgs. 12

Ammonium Muriate—
Antwerp, 3 t. 3 c. £60
Philadelphia, 12 3 305
Melbourne, 5 6 1 q. 94

Ammonium Sulphate—
Cheribon, 69 t. 3 q. £759
Sourabaya, 388 18 c. 2 4,410
Cullera, 50 450
New York, 50 540
Valencia, 125 16 4 1,110
Santander, 1 19 3 24
Las Palmas, 72 11 795
Gd. Canary, 34 13 2 460

Amorph. Phosphorus—
Kobe, 3 t. £520
Hong Kong, 5 cs. 53
Hiogo, 15 133

Antimony Salt—
Bombay, 5 kgs. £29

Bleaching Powder—
Baltimore, 97 cks.
Boston, 718 75 dms.
Bombay, 30 cs.
Cape Town, 42 bxs.
Genoa, 57 cks.
Ghent, 72
Leghorn, 17
Middleton, 20
Muncie, 69
New York, 123
Patras, 7
Pt Natal, 60
Rotterdam, 318
Seville, 4 pks.
Spring Grove, 77

Borax—
Valparaiso, 10 c. £12
Hamburg, 7 t. 12 2 q. 122
Mannheim, 10 14 1 —
Mayence, 18 3 —
Stamboul, 1 17
Sydney, 2 28
Cienfuegos, 7 5
Vera Cruz, 15 11
Natal, 4 57
Cardenas, 9 6
Havana, 10 7
Ibrail, 4 1 58
Montreal, 1 8 22

Calcium Carbide—
Adelaide, 2 c. £4
Melbourne, 6 13

Calcium Chloride—
New York, 10 t. 1 c. £19

Carbolic Acid—
Shanghai, 2 cs. £16
Pt. Elizabeth, 16 c. 6
St. John's, 4 6
Philadelphia, 5 t. 110

Carbon Bisulphide—
Savanilla, 8 c. £14

Castor Oil—
Santander, 2 cs.

Caustic Soda—
Alexandria, 15 dms.
Algoa Bay, 30 cs.
Almeria, 8
Amsterdam, 135
Antwerp, 68
Bahia, 20
Bangkok, 10
Batavia, 20
Bombay, 26
Braila, 60
Calamata, 25
Chicago, 50
Fiume, 28
Galatz, 20
Genoa, 235 35 brls
Ghent, 52
Hamburg, 120
Hiogo. 204
Hong Kong, 20
Kobe, 104
Leghorn, 35
Madeira, 25
Malaga, 40
Malta, 10
Mazatlan, 125
Melbourne, 28 4 cs. 25 bxs.
Messina, 25
Naples, 22
New York, 100 25
Oporto, 80
Otago, 20
Passages, 30 50 cks.
Piræus, 115
Puerto Cabello, 3
Rio de Janeiro, 15
Rio Grande, 196
Rotterdam, 18
San Sebastian, 40
Santander, 50
Santos. 20
Santa Catharina, 10
Seville, 647 10
Sourabaya, 60
Stettin, 35
Sydney, 15
Talcahuano, 5
Troy, 25 brls.
Valparaiso, 5
Venice, 45
Yokohama, 100
Valencia, 30

Chemicals (*otherwise undescribed*)
Cape Town, 16 c. 3 q. £12
Singapore, 3 t. 310
Calcutta, 20 12 52
Leghorn, 1 10 55
Havana, 7 4 24
Sydney, 4 1 1 58
Hamburg, 2 1 58
Philadelphia, 24 1 607
Rio G. do Sul, 6 1 2
Piræus, 2 18 2 14
Adelaide, 10 3
New York, 1 43
Varna, 10 brls. 33
Barcelona, 6 cks. 59
Bombay, 12 56
Alexandria, 10 33

China Clay—
Baltimore, 150 t.
Bombay, 30
Boston, 510
Calcuttaa, 36 cks.
Halifax, 12
Maranham, 20
New York, 350
Portland, 300

Chloride of Lime—
Pt. Elizabeth, 7 t. £56

Coal Products—
Alizarine
Lisbon, 2 cks.
Aniline Colour
Beyrout, 20 cs.
New York, 9 cks. 2 kgs.
Aniline Dye
Barcelona, 20 brls.
Lisbon. 1 kg.
Aniline Oil
Lisbon, 1 ck.
Sudbahia. 10 dms.
Aniline Salt
Fiume, 10 brls.
Lisbon, 1
Piræus, 10
Venice, 10
Creosote Salt
Antwerp, 96 t. £150
Naphtha
Melbourne, 25 dms.
Pitch
Antwerp, 100 t. 10 c.
Bilbao, 60 brls.
Cette, 549
Galatz, 10
Tar
Galatz, 165 brls.
Iquique, 15
La Guayra, 10

Cobalt Oxide—
Gijon, 1 c. 3 q. £62

Copperas—
Las Palmas, 5 t. 2 c. £10
Gefle, 10 3 20
Calcutta, 14 7 2 q. 30

Copper Sulphate—
Piræus, 10 t 5 c. £249
Venice, 65 4 3 q. 2,355
Bourgas, 1 25
Cette, 456 2 1,087
Nantes, 15 3 2 304
Bordeaux, 119 19 2 2,491
Leghorn, 25 2 539
Genoa, 69 15 2 1,586
Vigo, 20 1 3 413
Calamata, 9 17 2 182
Naples, 18 14 3 389
Lisbon, 64 12 3 1,322
Oporto, 47 13 2 1,053
Cape Town, 2 50

Galatz, 19 13 379
Madras, 11 2 12
Iquique, 12 4 257
Pernambuco, 5 6
Catacola, 5 10 135
Montreal, 5 4 1 123

Disinfectants—
St. John's, 3 c. £8
Sydney. 2 t. 9 60
Madras, 2 4 14

Dried Blood—
Teneriffe, 2 t. 18 c. £25

Guano—
Valencia, 10 t. 13 c. £75

Magnesia—
Havana, 5 cs.
M. Video, 2 pks.
Montreal, 6 cks. 8
San Juan, 4
Vera Cruz, 8

Manganese Oxide—
Antwerp, 12 c. £7

Manure—
St. John's, 3 t. £20
Las Palmas, 18 14 c. 2 q. 80
Teneriffe, 11 16 2 59

Oxalic Acid—
Boston, 18 t. 14 c. £490

Paint—
Amsterdam, 3 cs.
Arroya, 1 ck.
Cadiz, 43 dms.
Calcutta, 3 kgs. 100
Cardenas, 2 cks.
Cartagena, 72 dms.
Cienfuegos, 34 2 pks. 2 cks.
Fernando, 3
Feroftera, 2
Genoa, 5 cs.
Gibraltar, 1 14
Gijon, 16 dms.
Hamburg, 10 4 cks.
Havana, 2 8 dms.
Humacao, 8 cks
Malaga, 9 brls.
Manaos, 5 22
Manila, 200 2
M. Video, 12
Nassau, 8
Rosario, 10
Santiago de Cuba, 4
Shanghai, 1 100
Singapore, 160
Smyrna, 3
Valparaiso, 85 cs. 18
Vera Cruz, 41

Painters' Colours—
Alleghany City, 70 cks.
Bahia, 16 kgs.
Batavia, 10
Bonny, 18
B. Ayres, 160 pks.
Calcutta, 14 cs.
E. Liverpool, 1 bx.
Hong Kong, 800 31 cks.
Lisbon, 2
Manaos, 11
Maranham, 10 brls.
Mayaguez, 180
M. Video, 20 cs.
Para, 6 1 11 / 14 tcs, 41 brls.
Ponce, 3 dms.
Rotterdam, 5 cs.
Santiago de Cuba, 1
San Juan, 2 brls.
Valparaiso, 890 pks.

Paraffin Wax—
Barcelona, 20 bgs.
Bilbao, 5
Gijon, 32

Phosphorus—
Kobe, 10 c. £75
Shanghai, 24 cs. 193

Potassium Bichromate—
Montreal, 25 t. 3 c. 1 q. £732
Oporto, 1 3 2 37
Rio de Janeiro, 14 1 23
Samsoun, 18 29

Potassium Chlorate—
Antwerp, 1 t. £31
Asuncion, 4 c. 6
Corunna, 1 2 35
Hamburg, 2 9 74
Hiogo, 23 15 725
Lisbon, 10 16
New York, 4 19 160
Rotterdam, 19 31
Shanghai, 11 6 364
Sydney, 5 150
Tampico, 1 30
Vera Cruz, 2 64

Potassium Prussiate—
Genoa, 10 cks. £157

Potassium Stannate—
Bombay, 1 t. 1 c. 2 q. £58

Pyrolignite Lime—
Lisbon, 5 cks. £10

Salammoniac—
Barcelona, 3 t. 16 c. 1 q. £115
Braila, 5 8
B. Ayres, 16 26
Ibrail, 1 2 33
Malta, 6 9
Patras, 2 3
Rosario, 8 13

Salt—
Antwerp, 156 t.
Baltimore, 545 4 c.
Boston, 200
Brisbane, 123 11
Cadiz, 1 5
Caibarien, 50
Calcutta, 4,805
Cameroons, 159 10
C. C. Castle, 12 10
Cape Lopez, 4 10
Christiania, 10
Conakry, 39 1
Cape Town, 51 7
Cardenas 30
Cienfuegos, 58 18
Ghent, 50
Gibraltar, 2
Halifax, 100
Lagos, 50
Landana, 25
Matadi, 19 2
Melbourne, 40
Mirimichi, 350
M. Video, 5
Maculla. 12 10
Newcastle, 355
New York, 550
Noqui, 39 10
Nuevitas, 40
Para, 62 10
Pictou, 500
Pt. Natal, 202 7
Rangoon, 2,035
Rio de Janeiro, 2
Rio Del Rey, 20
Rio Munez, 220 7
Salt Pond, 12 10
St. John, N.B., 40
Sydney, 430
Townsville, 678 9
Victoria, 19

Salt Cake—
Antwerp, 120 t. £155

Saltpetre—
Manacs, 1 t. £23
Para. 1 10 c. 31
Rio Grande, 5 6

Sheep Dip—
B. Ayres, 2,500 dms. £685
Calcutta, 100 50
Madras, 50 19
Rangoon, 73 15
Sydney, 13 t. 2 q. 175

Soap—
Adelaide, 320 cs.
Algao Bay, 1,700 bxs. 1
Antwerp, 65
Bahia, 500
Boma, 55
Bombay, 488 119
Brisbane, 2 2 tnks.
Calcutta, 5
C. C. Castle, 625
Cape Town, 1,412 74
Cape Gracias, 300
Cape Lahou, 12
Cape Lopez, 25
Cameroons, 275
Dominica, 20
Dunedin, 2
Durban, 101 5
E. London, 1,013 40
Eloby. 30
Fuca, 20
Grenada 250
Greytown, 200
Guatanamo, 15
Half Jack, 50
Hamburg, 100 60 dms.
Havana, 101
Hobson's Bay, 21 tanks
Johannesburg, 100
Karachi, 525 87
Lagos, 796 31
Las Palmas, 100
Limassol, 22
Livingston, 20
Madras, 17 8
Manaos, 100
Matadi, 35 25
Mauritius, 3,070
Melbourne, 1
Montego Bay, 10
Montreal, 10
Mossel Bay, 1,258 12 bdls.
New York, 42
Old Calabar, 112
Opobo, 560
Ottawa, 23
Para, 1
Piræus, 1
Pt. Elizabeth, 100 100
Pt. Natal, 2,200 10 5
Rangoon, 625
Rawal Pindi, 35
Rio Del Rey, 112
Rotterdam. 250 560 dms.
San Fernando, 500
Shanghai, 1,047 4
Sierra Leone. 50
St. John's, N'd., 46 1
St. Lucia, 102
Sulina, 1 ck.
Sydney, 10
Teneriffe, 812
Trinidad, 300
Valparaiso, 50 1
Zanzibar, 250 bdls.
Wellington, 4(skl.) 1 tnk.

Soap Lyes—
Rotterdam, 81 t. £2,272

Soda Ash—
Baltimore, 17 cks.
Barcelona, 20
Bilbao, 50 bgs.
Bombay, 10 kgs. 8
Boston, 27 pks. / 200 bgs. 84 cks.
B. Ayres, 490 / 60 brls.
Calcutta, 100 kgs. 50
Callao, 95
Constantinople, 29
Genoa, 120 bgs.
Ghent, 768
Gothenburg, 10
Hango, 19
Hiogo, 321
Kobe, 50
Maranham, 50
New York, 3,938 123 tcs. 95
Oporto, 10
Philadelphia, 96
Rio de Janeiro, 70 brls.
Seville, 70
Smyrna, 150
Windsor, 320
Zante, 59

Soda Crystals—
Bombay, 270 kgs.
B. Ayres, 100 840 brls.
Galatz, 15
New York, 125 280 cks.
Rosario, 285

Sodium Bicarbonate—
Bombay, 275 kgs.
Galatz, 40
Hamburg, 80 6 cks.
Hamilton, 25 10
Havre, 10
Hiogo, 300
Ibrail, 40 20
Malta, 14
Marseilles, 56 dms.
Montreal, 200 bgs. / 300 kgs.
Naples, 32
Odessa, 50
Rotterdam, 25
Stettin, 20
Trinidad, 240

Sodium Carbonate—
Boston, 56 brls.
New York, 120

Sodium Chlorate—
Philadelphia, 25 kgs.
Rotterdam, 20 dms.
Seville, 10

Sodium Hypochlorite—
Antofagasta, 16 kgs.

Sodium Nitrate—
M. Video, 25 pks.

Sodium Oxide—
Leghorn, 50 cs.

Sulphur—
Boston, 100 t. 2 c. £427
Cardenas, 17 3 q. 6
Gothenburg, 50 214
Halifax, 10 3
Lagos, 2 1
Lisbon, 3 22
Manaos, 1 8
Para, 15 5
St. John, N.B., 12 3

Sulphuric Acid—
Maranham, 1 t. 2 c. 2 q. £20

Superphosphates—
Las Palmas, 5 t. £17
Nantes, 245 13 c. 1 q. 469
Wellington, 100 225

Tin Crystals—
Lisbon, 1 ck. £14

Varnish—
Antwerp, 14 cks.
Corfu, 2 cs.
Hong Kong, 6
Lagos, 4
Manaos, 1
Montreal, 2 52 pks.
Quebec, 16

White Lead
Algoa Bay, 16 c.
Madras, 2 cks.
Rosario, 6 kgs.

Zinc Chloride—
Bombay, 9 t. 5 c. £142

MANCHESTER.

Week ending April 19th.

Alum—
Bombay, 98 brls.

Bones—
Treport, 422 bgs.

Castor Oil—
Suez, 4 cs.

Caustic Soda—
Alexandretta, 20 dms.
Alexandria, 20
Beyrout, 30

Chemicals (*otherwise unaescribed*)
Alexandria, 100 brls.
Basle, 12 kgs. 4 cks.
Cologne, 20 5
Mersyne, 10

Coal Products—
Aniline Colours
Belgium, 4 kgs. 1 cs.
Sannesund, 3
Aniline Oil
Belgium, 1 dm.
Germany, 10
Aniline Salt
Belgium, 1 kg.
Germany, 10 cks.
Holland, 1 pn.
Carbolic Acid
Germany, 25 cks.
Naphtha
Treport, 25 cks. 10 brls.
Pitch
Belgium, 167 t. 1 c.
Havre, 975 4

Colours—
Holland, 1 ck.

Copperas—
Larnaca, 10 brls.
Mersyne, 10

Dyestuffs—
Indigo
Tunis, 4 chts.

Glue—
Holland, 12 cks.

Linseed Oil—
Alexandria, 65 brls.
Larnaca, 2
Malta, 6

Painters' Colours—
Malta, 5 cks. 1 cs.

Soap—
Accra, 90 bxs.
Beyrout, 7
Bombay, 4 cs.

Soda Ash—
Jaffa, 50 brls.

Soda Crystals—
Larnaca, 1 brl.

Sodium Bicarbonate—
Alexandria, 10 kgs

Sodium Naphthionate—
Germany, 9 cks.
Holland, 15

Starch—
Germany, 5 bgs.

Turpentine—
Malta, 2 brls.

Venetian Red—
Alexandria, 340 cks.

Zinc Chlorate—
Holland, 1 ck.

HULL.

Week ending April 15th.

Alkali—
Bergen, 15 cks.
Drontheim, 200 bgs.

Ammonium Sulphate—
Gothenburg, 1 ck.
Ghent, 100 bgs.
Palermo, 450
Rotterdam, 500
Venice, 298

Basic Slag—
Stettin, 4,060 bgs.

Chemicals *(otherwise undescribed)*

Amsterdam,	25 cks.		32 pks.
Antwerp,	18		35
Alexandria,			12
Christiania,	12		10
Copenhagen,	9		
Drontheim.	4		
Genoa,		6 cs.	
Hamburg,	53	35	
Hango,	1	1	
Reval,		1	
Rotterdam,		33	
Stettin,			5
Stockholm,	25	8	
Trieste,	197		

Coal Products—
Pitch
Antwerp, 263 t.
Rouen, 207
Tar
Christiania, 5 cks.
Copenhagen, 20 brls.
Hamburg, 20

Cottonseed Oil—
Amsterdam, 15 t.
Bremen, 22 4 c.
Christiania, 18
Copenhagen, 5 1
Gothenburg, 11
Hamburg, 15 13
Rotterdam, 57 4
Stavanger, 4 7
Stettin, 8 15
Stockholm, 1 10

Dyestuffs *(otherwise undescribed)*
Bergen, 3 cs.

Glue—
Gothenburg. 200 bgs.

Linseed Oil—
Amsterdam, 10 t.
Antwerp, 1 5 c.
Christiania, 7 3
Copenhagen, 1 14
Drontheim, 3 2
Hamburg, 1 15
Rotterdam, 6 1
Trieste, 19

Paint—
Drontheim, 3 cks.
Ghent, 1 cs.

Painters' Colours—
Amsterdam, 3 cks. 5 cs.
Antwerp, { 78 2 32 pks. 57 dms.
Alexandria, 2
Bremen, 21 3 64
Christiania, 3
Copenhagen, { 25 4 7 pks. 8 dms.
Drontheim, 12
Genoa, 10
Ghent, 37 447
Gothenburg, 8 14 10
Hamburg, 5
Hango, 1 10
Konigsberg, 15
Leghorn, 8
Rotterdam, 26 24
Rouen, 12
Stavanger, 2
Stettin, 4

Soap—
Gothenburg, 1 cs.
Stockholm, 2

Superphosphates—
Antwerp, 484 t.

Tallow—
Fiume, 57 brls.
Genoa, 94 cks.
Legborn, 78
Stockholm, 2

Varnish—
Antwerp, 5 cks. 7 cs.
Bremen, 13
Christiania, 6
Christiansund, 1
Copenhagen, 11
Ghent, 1 3
Hamburg, 1
Hango, 5
Reval, 1
Stettin, 35 1
Stockholm, 3

Waste Salt—
Amsterdam, 20 brls.

GLASGOW.

Week ending April 20th.

Alum—
Rio de Janeiro, £22

Ammonium Sulphate—
Barcelona, 31 t. 8 c.
Colombo, 5 1 3 q.
Dunedin, 9 2
Nantes, 20
Valencia, 166 2

Benzine—
Bordeaux, £190

Borax—
Melbourne, £34
Sydney, 26

Castor Oil—
Adelaide, £36

Chloride of Lime—
N. Zealand, 5 t. 8 c. 2 q.

Coal Products—
Aniline Dyes
Calcutta, £32
Creosote
Lisbon, £778 18s.
Creosote Oil
Bordeaux, £3,150
Boston, 115
Christiania, 40
Naphtha
Melbourne, £29
Pitch
Aviles. 1,250 t.
Danzig, 199
Gothenburg, £295
Madras, 50 10s.
Trieste, 250
Tar
Bombay, £20
Calcutta, 150
Colombo, 25
Hamburg, 346 t. 16 c.
Tar and Pitch
Bombay, £206 9s.
Rangoon, 47

Copperas—
Calcutta, 6 t. 4 c. 3 q.

Dyestuffs *(otherwise undescribed)*
Calcutta, £42 10s.

Dyestuffs—
Extracts
Canada, £55
Portugal, 47 14s.
Spain, 165 3
Logwood
Portugal, £62 9s.

Farina—
Gothenburg, £85
Rio de Janeiro, 47

Gutta Percha—
Huelva, £195

Lead Nitrate—
Paris, £200

Linseed Oil—
Cape Town, 14 c.
Dunedin, 8 t. 8 2 q.
Wellington, N.Z., 17 2

Magnesia—
Adelaide, £52 10s.

Manure—
Oporto, 177 t. 17 c.
Valencia, 34 11 3 q.

Paint—
Rangoon, £449

Painters' Colours—
Adelaide, £161
Auckland, 172
Boston, 103 1 cs.
Calcutta, 634
Dunedin, 215
Madras, 43 15
Malta. 227
Melbourne, 460 14
New Plymouth, 44
Oporto, 67
Sydney, 398

Paraffin Wax—
Barcelona, £687
Bilbao, 28
Bordeaux, 121
Cape Town, 3 t. 10 c. 3 q.
Fiume, £22 17s.
Gijon, 40
Lisbon, 23
Paris, 48
Pretoria, 150
Rouen, 38
Trieste, 105
Valencia, 80
Venice, 41

Potassium Bicarbonate—
Barcelona, £242
Boston, 390
Madras. 136
Philadelphia, 392
Rouen, 353

Potassium Bichromate—
Antwerp, £112
Oporto, 140

Potassium Muriate—
Colombo, £92

Potassium Prussiate—
New York, 2 t. 8 c. 3 q.

Salt—
Rangoon, 2 t. 10 c.

Sheep Dip—
B. Ayres, £28
Dunedin, 20

Soap—
Colombo, 1 t. 11 c. 1 q.
E. London, 13
Queenstown, 5

Sodium Bicarbonate—
Barcelona, 1 t. 9 c. 3 q.
Rouen, 10 7

Starch—
Antwerp, £55
Rio de Janeiro, 236

Sulphuric Acid—
Rangoon, £349

Tannin—
Stockholm, £48

Tin Crystals—
Lisbon, £43 17s.

Varnish—
Calcutta, £51 18s.
Rangoon, 72

White Lead—
Sydney, £84

White and Red Lead—
Invercargill, £55
Wellington, N.Z., 349

TYNE.

Week ending April 15th.

Alkali—
Amsterdam, 21 t. 4 c. 3 q.
Christiania, 1 3 2
Hamburg, 5 8 3
Rotterdam, 10 12 2
Trieste, 4 14

Alumina Hydrate—
Antwerp, 5 t. 3 c. 1 q.

Ammonium Sulphate—
Antwerp, 50 t. 11 c. 2 q.
Dunkirk, 76
Hamburg, 140 1

Antimony—
Ergasteria, 1 c.
Gothenburg, 2 t.
New York. 100 9

Barium Binoxide—
Hamburg, 5 t. 4 c. 2 q.

Barium Carbonate—
New York, 80 t.

Bleaching Powder—
Amsterdam, 34 t. 6 c. 3 q.
Bergen, 17 3
Christiania, 20 3 3
Drontheim, 10 19 3
Gothenburg, 75 3 1
Hamburg, 17 12
Konigsberg, 16 10 2
Rotterdam, 9 11

Caustic Soda—
Aarhuus, 1 t. 3 c. 1 q.
Antwerp, 19 16 3
Colon, 2 18
Copenhagen, 7 16 3
Hamburg. 13 19
Helsingfors, 21 18 3
New York, 100 8 3

Chloride of Lime—
New York, 9 t. 18 c. 3 q.

Coal Products—
Carbolic Acid
Odense, 12 c. 1 q.

Fluor Spar—
New York, 131 t. 16 c.

Litharge—
Hamburg, 1 t. 16 c. 3 q.
Helsingfors, 10 4

Magnesia—
Hamburg, 1 t. 12 c. 1 q.

Manure—
Valencia, 205 t.

Paint—
Antwerp, 7 t. 8 c.
Gothenburg, 9

Pyridine—
Hamburg, 1 t. 8 c.

Red Lead—
Christiania, 8 t. 18 c. 3 q.
Copenhagen, 7 1
Gothenburg, 2 12 3
Hamburg, 13 19
Helsingfors, 10 2
New York, 6 2 1

Soap—
Copenhagen, 5 c.

Soda—
Aarhuus, 10 t. 14 c. 2 q.
Amsterdam, 19 19 2
Christiania, 7 7
Copenhagen, 7 16 3
Ergasteria, 10 8 1
Helsingfors, 28 4 3

Soda Ash—
Bergen, 10 t.
Gothenburg, 50 17 c.
Hamburg, 5 8 1 q.
Konigsberg. 103 1 2
Trieste, 21 5 3

Sodium Hyposulphite—
Antwerp, 2 t.
New York, 14 6 c.
Rotterdam. 2 1

Sodium Sulphate—
Aalborg, 27 t. 10 c.

Sulphur—
Gothenburg, 140 t.
Helsingfors, 15 c.

Superphosphates—
Christiania, 12 t. 10 c.

White Lead—
Hamburg, 4 c.
New York, 58 t. 2

Zinc White—
Ergasteria, 4 c.

GOOLE.

Week ending April 12th.

Caoutchouc—
Boulogne, 4 cks.

Chemicals *(otherwise undescribed)*
Hamburg, 3 pks.
,, 70 dms.

Coal Products *(otherwise undes.)—*
Amsterdam, 49 cks.
Antwerp, 2 1 cs.
Boulogne, 23
Dunkirk, 1
Ghent, 6
Hamburg, 2 1
Rotterdam, 58 1

Coal Products—
Pitch
Antwerp, 601 t.

Painters' Colours—
Ghent, 1 ck.

GRIMSBY.

Week ending April 15th.

Alkali—
Dieppe, 4 cs.
Hamburg, 10

Caoutchouc—
Esbjerg, 1 cs.

Chalk—
Rotterdam, 30 cks.

Coal Products *(otherwise undes.)—*
Dieppe, 27 cks.
Hamburg, 1 8 btls.

Dyestuffs *(otherwise unaescribed)*
Malmo, 1 brl.

Painters' Colours—
Antwerp, 7 cks. 1 cs. 2 pks.
Rotterdam. { 2 kgs. 2 cks.

Stearine—
Malmo, 50 trcs.

Tallow—
Malmo, 130 trcs.

PRICES CURRENT.

WEDNESDAY, April 26, 1899.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9	&	8/3
,, Glacial .. .. ,,			35/-
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	9
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	0	11½
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	0
Arsenic, white powdered .. .. nett per ton	18	15	0
Alum, loose lump .. .. ,,	4	5	0
Alumina Sulphate (pure) .. .. ,,	3	15	0
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2¾
,, = 24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	19	0	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	11	0	0
,, ,, (grey) Hull .. .. ,,	11	0	0
Aniline Oil (pure) .. .. per lb.	0	0	4½
Aniline Salt ,, ... ,,	0	0	4
Antimony .. .. per ton	39	5	0
,, (tartar emetic) .. .. per lb.	0	0	7½
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	4	5	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	5	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6¼
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30% A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	7½
,, 50/90 ,, ... ,,	0	0	8
Carbolic Acid (crude 60°) .. .. ,,	0	1	11½
,, (crystallised 40°) .. .. .. per lb.	0	0	6¾
,, (liquid 95/97%) .. .. .. per gallon	0	1	0
Creosote (ordinary) .. .. ,,	0	0	3¾
,, (filtered for Lucigen light) .. .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	3	0	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	4	0
Solvent Naphtha, 90% at 160° .. .. per gallon	0	0	10
Copper .. .. per ton	77	7	6
,, Sulphate .. .. ,,	26	5	0
,, Oxide (copper scales) .. .. ,,	57	0	0
Glycerine (crude) 80% .. .. ,,	24	10	0
,, (distilled S.G. 1250°) .. .. ,,	48	10	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	2	6
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet)	15	10	0
,, Litharge Flake (ex ship) .. .. ,,	16	10	0
,, Acetate (white ,,) .. .. ,,	24	0	0
,, ,, (brown ,,) .. .. ,,	18	10	0
,, Carbonate (white lead) pure .. .. .. ,,	18	10	0
,, Nitrate .. .. ,,	22	10	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	4	17	6
,, ,, (grey) (ex ship) .. .. ,,	7	17	6
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton	9	10	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	14	15	0
,, Borate .. .. per cwt.	2	0	0
,, Ore, 70% .. .. per ton	3	10	0
Methylated Spirit, 61° O.P .. .. per gallon	0	2	0
Naphtha (Wood), Solvent .. .. ,,	0	3	0
,, ,, Miscible, 60° O.P. .. .. .. ,,	0	3	10
Oils:—			
Cotton-seed .. .. per ton	17	10	0
Linseed .. .. ,,	19	5	0
Stearine .. .. ,,	26	0	0
Phosphorus (Yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	10	0
,, Chlorate .. .. per lb.	0	0	3½
,, Cyanide, 98 % .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) 90 % .. .. per ton	22	0	0
,, ,, ,, 75/80 % .. ,,	17	15	0
,, Potash Hydrate Liquid 50 % .. .. ,,	11	0	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	2	12	6
,, Prussiate Yellow .. .. per lb.	0	0	8
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	0
,, Muriate, 80 % ,, ... ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3 9/16
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % .. nett per ton	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, f.o.r. w'ks.	4	5	0
,, ,, (Carb. Soda-ash) 48 % .. ,, ,,	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,,	4	0	0
,, ,, (Soda Crystals) .. .. .. ,, ,,	2	10	0
,, Acetate (ex-ship) .. .. ,,	12	15	0
,, Arseniate, 45 % .. .. ,,	13	10	0
,, Chlorate .. .. per lb.	0	0	3¼
,, Borate (Borax) .. .. nett per ton	15	15	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton	7	12	6
,, ,, (74 % Caustic Soda) ,, ,, ,, 10 ton lots	7	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,,	7	0	0
,, ,, (60 % Caustic Soda) .. ,, ,,	6	0	0
,, ,, (pure liquor 90° Tw.) .. ,, ,,	3	10	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate (cwt. kegs) .. .. ,,	6	15	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25 % .. .. ,,	15	10	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	8	0
,, Nitrite, 98 % .. .. per ton	26	0	0
,, Phosphate .. .. ,,	10	7	6
,, Prussiate .. .. per lb.	0	0	6¼
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	10	0
,, Stannate, 40 % .. .. per cwt.	3	10	0
,, Sulphate (Salt-cake) .. .. per ton	1	8	0
,, ,, (Glauber's Salts) .. .. .. ,,	1	15	0
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	4	15	0
Strontium Hydrate, 100 % .. .. ,,	10	15	0
Sulphocyanide Ammonium, 95 % .. .. .. per lb.	0	0	5¾
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton	7	0	0
,, (Roll Brimstone) .. .. ,,	6	0	0
,, Brimstone: Best quality .. .. ,,	4	12	6
Superphosphate of Lime (26 %) .. .. ,,	2	10	0
Tallow .. .. ,,	24	0	0
Tin Crystals .. .. per lb.	0	0	7½
,, English Ingots .. .. per ton	119	0	0
Zinc (Spelter) .. .. ,,	28	15	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	7	10	0
,, Sulphate, Crystal .. .. ,,	7	15	0

THE

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LATE ADVERTISEMENTS.

TO Sulphuric Acid Manufacturers: One high-pressure Steam Engine, with air pumps complete, steam cylinder 7 in. diameter, 12 in. stroke, two air cylinders, 11 in diameter, 11 in. stroke. £35. One wrought iron lead-lined egg compressor vessel, 7 ft. diameter, 7 ft. long, £50. Two wooden lead-lined covered store acid tanks, about 10 ft. by 6 ft. by 5 ft., with manhole lids and branch pipes, £16, each.—Apply, McDougall Bros., Millwall Docks, London, E.

WANTED, position as CHEMIST or MANAGER; good practical experience in Rectified Vitriol, Hydrochloric, Nitric Acids, pure; Epsom and Glauber Salts Tin, Zinc, and Iron Salts, Bleach, Oleine Oil, etc; moderate salary.—"Moderate," *Chemical Trade Journal* Office, Manchester.

CHEMIST and MANAGER is open to erect complete installations for the Treatment of Bones and the Manufacture therefrom of Bone Fat, Glues of the best quality, Meal, Phosphate of Lime, Ammonia, etc.—Address, "Installation," *Chemical Trade Journal* Office, Manchester.

TENDERS

TO MANUFACTURING CHEMISTS AND OTHERS.

THE Corporation of Birkenhead invite OFFERS for the Purchase and Removal of the AMMONIACAL LIQUOR produced at the Gas Works, for a period of one, three, or five years, commencing on the 1st July, 1899. A pipe is laid between the Gas Works and the River Mersey for the conveyance of liquor into the Contractor's boats, or, if desired, the Corporation will provide appliances on their own Railway Siding to pump the liquor direct into the Contractor's tank wagons.

The Contractor whose tender is accepted will be required to enter into a formal contract or agreement with the Corporation, upon the specific terms and conditions contained in the draft contract which has been prepared by the Town Clerk, and deposited in his office for inspection.

Forms of tender and further particulars may be obtained from Mr. T. O. Paterson C.E., Gas Engineer, at the Gas Works, Thomas-street.

Tenders, sealed and endorsed "Tender for Ammoniacal Liquor," to be sent in to me not later than 5 p.m., on Friday, 26th May, 1899.

The Corporation do not bind themselves to accept the highest or any tender.

By Order, ALFRED GILL, Town Clerk.

Town Hall, Birkenhead, 4th May, 1899.

TO TAR DISTILLERS AND OTHERS.

THE Corporation of Birkenhead invite OFFERS for the Purchase and Removal of the SURPLUS TAR produced at their Gas Works during a period of one, three, or five years, commencing on the 1st July, 1899.

Deliveries will be made at the Gas Works either into Contractor's tanks on the Gas Works Railway Siding or into tanks for conveyance by road to boats.

The Contractor whose tender is accepted will be required to enter into a formal contract or agreement with the Corporation, upon the specific terms and conditions contained in the draft contract which has been prepared by the Town Clerk, and deposited in his office for inspection.

Forms of tender and further particulars may be obtained from the Gas Engineer, Mr. T. O. Paterson, C E, Gas Works, Thomas-street.

Tenders, which must be on the printed form supplied, sealed and endorsed "Tender for Tar," to be sent in to me not later than 5 p.m. on Friday, the 26th May, 1899.

The Corporation do not bind themselves to accept the highest or any tender.

By order, ALFRED GILL, Town Clerk,

Town Hall, Birkenhead, 4th May, 1899.

PRESERVATIVES IN FOODS.

AS we anticipated last March, the discussion of the new Food and Drugs Act in Committee has been free, and the fight for amendments stubborn.

Particularly so has this been the case in connection with preservatives, for the clause in the Bill practically left matters just as they formerly stood, whereas this measure had been looked to by reformers for definite proposals on dealing with the addition of preservatives.

Various suggestions and amendments have been proffered, and certainly there is no lack of interest or endeavour among what we may call outsiders; by which we mean societies that can only petition the Government, and are not represented at the proceedings of the Standing Committee now considering the Bill.

We notice that special attention has recently been called to the action of sodium fluoride, which has been coming into vogue lately as a preservative, and judging by the investigations made by Shultz and others, this more or less new addition to the ranks of antiseptics ought to be classed as a feeble poison. Naturally, Dr. A. Hill and societies such as the Incorporated Society of Medical Officers of Health will not fail to profit by this additional handle, and grind it for all it is worth.

Some of the suggested amendments have been commendably practical. One of them was to the effect that the amount of preservative per pound or gallon should at least be stated in the case of all imports of butter, milk, cheese, etc., but this idea, like all the other amendments, has been rejected by an overwhelming majority. Possibly there may be some hope for the notion embodied in the resolution passed at the influential conference held by the Society of Arts this week, because it leaves the *use* of preservatives pretty much as it stands, but places the onus of condemning their use on those who are most eager to suppress the practice.

This end is attained by reversing the order of things, as stated in the Bill, and, instead of making it necessary for the user to prove that his antiseptic is harmless, it is suggested that it shall be necessary for the Board of Agriculture to prove that the use of the antiseptic is injurious.

There is no doubt that objectors to the reasonable use of preservatives, other than salt, must face the objections that could be raised against the use of this "chemical"—salt itself. Though no one but a hypochondriac would inveigh against the use of salt, nevertheless, if attacked with the same weapons as are used against boric acid, formalin, etc., a very strong case against its use could be constructed. Starting with its essentially chemical nature, a harrowing account of the ease with which it can be converted into such pungent and repugnant bodies as hydrochloric acid gas and chlorine could readily be conjured up; while, from a medical point of view, the strict injunctions which have to be enforced in the Navy, to check the ravages of scurvy, engendered by

the presence of this "sophisticated antiseptic" in the food, when coupled with the expense of regularly dosing the men with antiscorbutics, would assuredly sound its death knell.

But to set against this we have the all-powerful influence of precedent. The very homeliness and familiarity of salt protects it from attack. What is more, the practical experience of years teaches us that it is better to incur the risks of scurvy and indigestion, which can be minimised by secondary means, than to incur the results of eating unsound foods; and against this practical teaching the scientific objections of health reformers can avail nothing.

Taking it for granted that only reasonable quantities are used, may it not be that the case of modern preservatives is on all fours with that of salt? And if so, would it not be much wiser and far more helpful if Sanitary Associations and Health Societies would devote their energies to the better control of the existing realities, instead of beating the air in their endeavours to attain to impractical and uncertain idealities?

THE ANALYSIS OF GLUE.

By Richard Kissling.

TWO new methods have recently been proposed for the analysis of glues. Stelling recommends the estimation of the non-gluey material; Fels proposes estimating the viscosity of a solution of the glue.

Stelling's process consists of adding to a solution of glue (1 part of glue to 4 parts of water) alcohol at 96°, in small quantities at a time, while constantly stirring (we take 15 parts of glue and 60 parts of water, and make up to 250 c.c. with alcohol).

We then determine the proportion of non-gluey matter present by evaporating down an aliquot part of the alcoholic solution, previously filtered, and weighing the residue. This process is thus based on the supposition that alcohol at about 72 per cent. in volume leaves the glutine intact, while it dissolves the products of decomposition, considered as non-gluey material.

Glutine is not entirely insoluble in alcohol at 72 per cent., inasmuch as, on evaporating down the filtered alcoholic solution, we obtain a residue consisting principally of glutine, and possessing a strong adhesive power, almost equal to that of the original glue employed.

Nevertheless it cannot be denied that Stelling's process has a certain value—very small, it is true—for the valuation of glues; above all when we have to deal with products of a superior quality, products containing substances soluble in alcohol, in quantities much smaller than are present in ordinary glues.

Fels's method—that is, the determination of the viscosity—can also give very useful indications, but here again there are certain reservations which must be made. The viscosity is determined at 25° with an Engler viscosimeter. I claim to have discovered that solutions of glue undergo—after a more or less prolonged time of standing—modifications from the point of view of fluidity. In this way, a freshly prepared solution had a viscosity of 9·0, but after standing for twenty-four hours it had assumed a gelatinous consistency. Another solution underwent the following modifications:—Its degree of viscosity was 3·7 after two hours, 4·8 after twenty-four hours, and 5·4 after forty-eight hours.

I would here recall that the process I described some years ago now, while being somewhat more complicated than the above, merits more confidence in judging the value of a glue. This process consisted in measuring the consistence of the jelly formed by 100 grms. of glue and 300 grms. of water.

As far as the adhesive power is concerned I have shown, by numerous experiments, that, from this special point of view, the glue from bones—which is of a decidedly inferior quality—is quite as good as that made from skin, which is of a superior quality. It is quite another matter in so far as the consistency of the jelly is concerned. The researches which I have carried out in this direction lead me to the conclusion that the jelly made from glues from skin is generally firmer than the jelly derived from glues from bone.

In the examination of a glue it must not be forgotten to notice the smell; this characteristic may give very useful indications as to the resistance of the product, and its tendency or not, towards putrefaction; with regard to the above, skin glues are much better than those made from bone. Finally, the proportion of acid present in a glue is a matter of capital importance for certain purposes for which it is required. The method I have proposed for the estimation of free and combined sulphurous acid, has once more enabled me to satisfy myself that glues from skin are superior to glues from bone. The determination of the water, ash, and fatty matters gives less important indications.

Reports of Companies.

PETRIFITE, LIMITED.

The annual general meeting of the shareholders of this company was held last week at Winchester House, Old Broad-street, E.C. Colonel H. C. Seddon (chairman) in moving the adoption of the report, said the balance-sheet had been open to inspection at the company's offices for the past eight days, as laid down in the articles of association. As a matter of fact, this first of the company's balance-sheets—the only one, the directors had every reason to hope, which would not include the all-important item of dividend—dealt with very little beyond preliminary expenses and outlay on construction work, and those mainly in connection with the supply of raw and calcined magnesite, since, as explained at the December meeting, it was found to be impossible to produce petrifite on a commercial scale before the completion of the railway and other works in Euboea insured the regular supply of the calcined magnesite necessary for its manufacture. It was hoped that the railway would have been ready by the beginning of this year, but they were advised that it would not be at work until the end of May. With regard to the cement business, regular supplies of calcined magnesite being now assured, steps were being taken to proceed at once with the erection of the works required for the manufacture of petrifite and its kindred products, such as petrifine, an internal plaster or cement, which it was expected would meet with a very large demand. When once they were able to meet the home demand for their cements they would be in a position to negotiate the sales of their foreign patents, which they hoped would prove a valuable addition to the company's assets. The directors were pleased to state that the productive period of the company's existence had now set in, 4,370 tons of raw and 1,080 tons of calcined magnesite having been already shipped to, and practically all sold on, the Continent at satisfactory profits. The directors were, on the whole, well satisfied with the results of their first year's progress, and had every hope that the profits arising from the magnesite industry alone, and without taking petrifite into consideration at all, would place the company on a sound dividend-paying footing by the end of the current year. The working capital of the company was considerably less than the directors hoped to have started with, but this had been remedied to a certain extent, as no less than 6,600 of the unissued shares had been taken up since the statutory meeting in January, 1898, and a further 5 000 would probably be allotted at an early date. Mr. James Howden seconded the motion. In reply to Mr. May, the Chairman said, with regard to not circulating a balance-sheet, he was aware that it was unusual; but it was put into the articles, no doubt, for the purpose of preventing knowledge of their business being made public, working as they were under patents. However, the directors had no strong feeling in the matter, and would act on the wish of the shareholders. He then submitted to the meeting the question whether in future the accounts should be circulated, and an affirmative decision was given. The report and accounts were then adopted.

Russian Petroleum and Liquid Fuel Company.—The dividend warrants in payment of the half-yearly dividend on the preference shares and of an interim dividend on the ordinary shares at the rate of 15 per cent. per annum have been posted.

Canadian Pulp Industry.—The Dominion Statistician has prepared some interesting figures regarding the growth of the pulp industry in Canada. Pulp factories were not mentioned in the Dominion census of 1871; but in 1881 and 1891 they are recorded. In 1881 there were five factories in Canada, the capital invested being $92,000, and the annual product $63,000; while in 1891 the number of factories had increased to 24, the capital invested to $2,900,907, and the annual product to $1,057,810. Since then the increase has been very rapid. Exact statistics of the industry are not available; but a list of 39 pulp factories in Canada, with a yearly output estimated approximately at 150,000 tons, about a third being sulphite and other chemical pulps, and two-thirds being mechanical pulp, has been compiled. The bulk of the output is made into paper, largely consumed in Canada; but three factories manufacture pulp for export. One of the largest manufacturers estimates that the labour employed in the manufacture of wood pulp "from the stump to the car" amounts to about six men to each ton of pulp, the wages running from $1.25 to $2 per day. The exports of wood pulp from the Dominion, according to the trade and navigation returns, are given as follows:—1890, $80,006; 1891, $188,198; 1892, $219,458; 1893, $386,092; 1894, $547,217; 1895, $590,874; 1896, $675,777; 1897, $741,959; 1898, $1,210,421. The exports to the United States were:—1894, $368,256; 1895, $336,385; 1896, $557,085; 1897, $576,720; 1898, $534,305.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Manufacture of Soap. J. Lewkowitsch and J. McNeil. 7,999. April 17.
Improvements in Filters. J. Freeman. 8,010. April 17.
Disvulcanising Caoutchouc and similar Materials. A. E. J. V. J. Theilgaard. 8,041. April 17.
Production of Useful Products from Sea Weed. A. Krefting. 8,042. April 17.
Treating Complex Tin Ores. G. de Bechi. 8,043. April 17.
Manufacture of Sulphate and Chlorine. A. Clemm. 8,049. April 17.
Manufacture of Soaps. H. Scriba. 8,050. April 17.
Improvements in Electrolytic Apparatus and Processes. A. Dittmar. 8,065. April 18.
Apparatus for the Production of Carbide of Calcium. T. W. Lench, R. C. Hiscock, and W. Holby. 8,103. April 18.
Electric Furnaces for the Manufacture of Carbide of Calcium and other Metallic Oxides. J. K. Starley and J. Bastick. 8,104. April 18.
An Improved Soap Compound for Dressing Yarns. L. Grunhut. 8,142. April 18.
Improved Manure or Fertiliser. O. Barber. 8,153. April 18.
Manufacture of Portland Cement. W. E. Hopps. 8,210. April 19.
Treating Sewage and other Effluent Waters. W. Watson. 8,268. April 20.
Manufacture of Carburet of Calcium. J. Bilbie and J. A. Wanklyn. 8,311. April 20.
Rendering Wood Fireproof. S. Cowper-Coles. 8,345. April 21.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in the Process of Making Calcium Carbide. G. Bower, St. Neots, Hunts. (Communicated by J. E. Hewes, 421, Chestnut-street, Philadelphia, U.S.A.) Eng. Pat. 4,856. February 28, 1898.

A mixture of lime, carbon, and a flux is heated in a horizontal electric furnace. Manganic oxide is the flux, which in its action, it is claimed, facilitates the production of nascent calcium and its combination with the carbon, while it also elimates phosphorus and sulphur. A suitable charge for the furnace may be prepared from 26 parts of carbon, 64 of calcium oxide, 8 of calcium carbonate, and 2 of manganese oxide. There are two figures.

Improvements in Condensation Chambers for the Manufacture of Sulphuric Acid. Dr. T. Meyer, 10, Wederstrasse, Harburg a/Elbe, Prussia. Eng. Pat. 18,376, August 26, 1898.

Instead of the usual form of vitriol chamber, a number of vertical chambers of circular or polygonal section are connected in series, the connections being made in such a fashion that the gases enter tangentially at the bottom of each chamber and escape at the top. The travel of the gases is thus increased, and several other advantages are claimed. There are two figures.

A New or Improved Method for the Disposal of Distillers' or Brewers Refuse. G. and J. S. Souter, Greyfriars Foundry, Elgin, N.B. Eng. Pat. 11,532. May 23, 1898.

Burnt ale and spent lees are evaporated to a density suitable for feeding cattle, &c, by concentrating in a marine evaporator, in which the steam for heating is admitted to a number of coiled pipes. The steam generated from the spent lees is utilised, and the waste heat from the stills is also turned to account as is shown in the two drawings which accompany the specification.

Improvements Relating to Paints suitable for Coating Iron and other Surfaces. K. L. V. Zimmer, 49, Schaferkampallée, Hamburg, and The Siderosthen Paint Syndicate, Ltd., 91, Queen Victoria-street, London, E.C. Eng. Pat. 8,045. April 4, 1898.

An improved solvent is suggested for the glossy black substance described in patent 7,366/95, obtained by distilling the tar (left from the preparation of gas from oil or fat) at 250° C. This solvent is prepared by taking the liquid products resulting from the distillation of the tar (or else shale oil, Russian, or American petroleum) and subjecting it to fractional distillation. The fractions coming over between 150° C. and 250° C. are collected and constitute the desired solvent. Of the aforementioned products suitable for fractionating, preference is given to the distillate obtained in the treatment of the oil-gas tar.

Improvements in the Manufacture of Mercury. J. C. Mewburn, 55, Chancery-lane, W.C. (Communicated by Chem. Fab. von Heyden, G. mit Beschränkter, Haftung, Radebeul, Dresden, Germany). Eng. Pat. 13,800. June 21, 1898.

In order to obtain mercury in a state in which it is soluble in water, salts of mercury are reduced with protoxide salts of tin, and the colloidal mercury precipitated with ammonium salts. Thus a solution of mercurous nitrate, acidified with nitric acid, is added to a nitric acid solution of protoxide of tin. The colloidal mercury is precipitated as a black mass, having a metallic lustre, by the addition of ammonium citrate. In this form the mercury gives a dark solution with water.

Improvements in the Preparation of Corrosive Sublimate for Sale. P. Stern, 3, Dorotheenkirche, Breslau. Eng. Pat. 20,081. September 22 1898.

Instead of making into pellets with salt, &c., which are often spoiled by deliquescing and the like, strips of bibulous paper are steeped in a solution of given strength, so that when dried they contain a given quantity of corrosive sublimate. By merely soaking these in water a solution of any desired strength is easily and quickly prepared, while the packets of papers are convenient to sell and handle.

THE MANCHESTER SEWAGE PROSECUTION.

At the Manchester County Police Court, on Tuesday, the case of the Mersey and Irwell Joint Committee *v* the Manchester Corporation was mentioned to the Stipendiary Magistrate (Mr. Yates, Q.C.). Mr. W. H. Wilson, clerk to the Mersey and Irwell Joint Committee, reminded the Bench that the case stood adjourned informally until Thursday, 4th inst, in consequence of certain proceedings of the Joint Rivers Committee and of communications received from the Corporation of Manchester, in which it was stated that they intended to put pressure upon the Bench to adjourn the case.

The reason for this pressure was the difficulty the Manchester Corporation would have in getting together the expert witnesses they intended to call.

Mr. Yates remarked that the only thing favouring an adjournment was the personal convenience of counsel.

Sir Joseph Leese said if the Bench could adjourn the case as a matter of personal convenience he would be very glad.

Mr. Yates said it would be on personal grounds that the Bench agreed to it.

Mr. Wilson said that, however anxious he might personally be to meet the wishes of Sir Joseph Leese, he was bound by his instructions to say that he could not consent to an adjournment.

It was ultimately decided by the Bench to adjourn the case until the 30th inst. Formal application for the adjournment was made and granted on Thursday.—(See also report of Mersey and Irwell Joint Committee's proceedings p. 301.

New President of the Society of Chemical Industry.—On the retirement of the existing President (Mr. Beilby) at the annual meeting of the society, which is to be held at Newcastle in July next, we hear that Prof. F. W. Chandler, of Columbia College, New York, and president of the New York Section, will be nominated as Mr. Beilby's successor. Prof. Chandler was over here about twelve months ago, giving evidence before the Petroleum Commission in support of the low flash party.

Trade Refuse in Manchester Sewers.—The Manchester Corporation have issued new regulations for the admission of trade refuse into the sewers. All liquid trade refuse from the manufactory is to be passed into and through suitable settling tanks to be approved by the Corporation, the same to be constructed and at all times maintained by and at the cost of the owner, to the satisfaction of the Corporation. By means of the settling tanks, and by such other means as shall be from time to time approved by the Corporation, the resulting effluent shall be made :—(a) free from solids in suspension beyond 15 grains to the gallon, (b) free from any substance matter or thing which shall or may (either alone or in combination with the ordinary sewage), (i.) be injurious to the sewers or the sewage therein, (ii.) cause or create a nuisance either within or without the sewers, (iii.) be dangerous or injurious to health either within or without the sewers, and (c) free from any substance matter or thing the discharge of which into the sewers may contravene any public or local Act of Parliament or rule of law. The owner shall remove as frequently as may be necessary from the settling tanks all solid refuse and solid matter which may be from time to time deposited therein. The maximum aggregate daily quantity of effluent which may pass from the manufactory into the sewer shall be agreed between the owner and the Corporation before any connection with the sewer is made or any works for that purpose are commenced. The size and capacity of the drain for conveying the effluent from the manufactory to the sewer is to be determined by the City Surveyor.

THE GERMAN CHEMICAL AND DYE INDUSTRIES.

(*Concluded from page 283.*)

In chemical products there are some very considerable items. *Muriate of potash* heads the list with 96,000 tons, valued at £680,000., against 80,000 tons only in 1897. The United States are far and away the biggest buyers and are increasing their custom. Last year they took 53,000 tons of the total, against 11,000 each to Great Britain and France, which allows for relatively small quantities only to the remaining countries. Sulphate of potash was shipped to the extent of 27,000 tons, valued at £175,000. Again the United States lead the way with 17,000 tons, Great Britain, France, and Holland with some 2,500 tons each. The corresponding figure for 1897 was 21,000 tons only. Cyanide of potassium showed the very large increase from 1,060 tons in 1897 to just over 1,900 tons last year, valued at £185,000. The mining countries are the buyers here, the Transvaal 875 tons, British South Africa 520, and Australia 275 tons. *Nitrate of potash* was represented by the still larger sum of £205,000, and here again the increase was substantial, namely, from 9,000 tons in 1897 to nearly 11,000 last year. We were the largest buyers with 3,750 tons, Holland next with 1,870, Brazil third with 700 tons, and the rest widely distributed in gradually diminishing quantities throughout the Eastern as well as the Western hemispheres Bichromate of potash for a change showed a decline, from 770 tons to 690, valued at £27,500. France was the only important buyer. *Chlorates of potash and soda* together maintained their position at just over 800 tons, valued at £29,000. Russia and Belgium for 190 and 140 tons respectively were the principal buyers. *Potash* was shipped to the exetnt of 13,450 tons, valued at £160,000., Great Britain, the United States, Holland, and Belgium taking from 2,000 to 3,000 tons each. The shipments of *caustic potash* were worth £210,000., the quantity showing the substantial improvement from 5,500 tons in 1897 to no less than 8,500 tons last year. Of this we took 2,350 tons, Sweden 2,000, and Holland 1,900. *Prussiate of potash* was valued at £25,000., and of the 335 tons the United States and Belgium each took 130.

We pass now to salts of sodium. For *soda and soda crystals* Sweden was the only important customer, taking 730 out of the total of 1,940 tons, valued at £6,000. The shipments of bicarbonate of soda were slightly under 1,000 tons, Belgium and Russia being moderate buyers. In calcined soda (soda ash) there was a substantial falling off, from 45,600 tons in 1897 to 37,000 tons only, valued at £167,000. Switzerland was still the most important buyer, taking 8,950 tons of the total; Belgium, 7,000; Sweden, 5,000; and Italy, 4,500. British manufacturers have not yet allowed themselves to be displaced here, as our receipts were limited to 1,750 tons against the 450 tons we shipped to Germany, despite the duty of 25s. per ton. Silicate of soda improved from 4,800 to 5,175 tons, worth £15,000., Belgium and Italy being the leading outlets. Unlike caustic potash, *caustic soda* shows only a small gain from 4,800 to 5,700 tons, valued at £51,000, nor has Germany yet made any headway against our makers, as Switzerland and Belgium were the only important buyers. *Bichromate of soda* did somewhat better, gaining from 1,880 to 2,140 tons, valued at £70,000. France took just half, Switzerland 280 tons, Great Britain, Belgium and Italy an average of some 200 tons each. *Sulphate of soda* was exported to the extent of 32,000 tons, also an improvement from 29,000 tons in 1897, the value being estimated at £48,000. Belgium leads the way with 16,000 tons, Holland, Austria and Russia dividing a further 12,500. Of the 5,000 tons *sulphite of soda*, over 3,000 were shipped to the United States. There was a decrease in this instance of 600 tons and the value was estimated at £25,000.

Of other leading chemicals *carbonate of ammonia* is represented by 2,800 tons, valued at £65,000, Switzerland, the United States and Austria dividing about half this quantity among them fairly equally. *Sulphate of ammonia* figures for barely 4,100 tons, valued at £32,500., an increase from 2,600 tons only in 1897. Belgium was the only large buyer, and took 3,100 tons. The export of *bleaching powder* was valued at £105,000., the quantity increasing from 13,600 to 16,800 tons. Despite the duty, the shipments to the United States reached 6,300 tons, and not content with supplying our customers, German makers let us have 2,750 tons as well. Belgium took 2 900 and Austria 1,600 tons. *Chloride of magnesia* rose from 13,250 to 14,250 tons, valued at £31,000. Of this Great Britain purchased 8,500 tons, the only other customer worth mentioning being Austria for 1,800 tons Magnesia and carbonate of magnesia were represented by £3,000. only.

Acids constitute a not unimportant division of the German chemical industry. Tartaric heads the list with a value of £165,000, against £140,000. only in 1897. Of the 3,170,000 lbs. Great Britain takes by far the largest quantity, the proportion being 1,750,000 lbs., or more than half. France follows a long way behind, Switzerland and Spain being the only others of note. Sulphuric comes second with £96,000., a gain of £24,000. on the previous year. The quantity was 35,000 tons, of which the Netherlands absorbed 7,000, Austria 8,000, Switzerland 5,000, France and Belgium about 3,500 each. The value of the exports of oxalic acid was £72,000, against £65,000., the quantity represented by the former being 2,350 tons. The United States led the way with takings of 870 tons, followed by France and Great Britain with 370 tons each, Austria and Italy with a little under 200. Tannic acid at £63,000. showed very little change. The weight was 1,260,000 lbs., of which we were the largest buyers, our proportion being 385,000 lbs., against 170,000 lbs. each to France and Austria, the next on the list. *Carbolic acid* was valued at £41,000. only, against £47,000., one of the few instances of a decline. Of the 3,800,000 lbs. our share was 750,000 lbs, while Russia and France took respectively 825,000 and 650,000 lbs. Salycylic acid was just about maintained at £70,000. Of the 1,000,000 lbs. we took barely one fourth, and were the principal buyers. Carbolic acid was valued at £41,000., and represented 3,800,000 lbs., a decrease of over 10 per cent. on 1897. Russia, Great Britain, and France were the largest buyers. Carbonic was worth £30,000., and in this instance there was a gain from 5,500,000 to 6,600,000. Holland took about 35 per cent. of the total, and Belgium another 20 per cent. Of hydrochloric acid the export was 13,400 tons, valued £30,000, Switzerland absorbing half, France and Sweden smaller quantities. These are the only acids commercially important, the others when given separately being for smaller amounts, but they are mostly classed as unenumerated. The exports of *copper sulphate* were valued at £28,000. only, less than half the previous year. *Green vitriol* was worth £6,000., as against £5,000, and white £2,500., against £2,000. Most of this last was purchased by Great Britain. Of neither of the others were our takings sufficient to enumerate.

There remain a number of items to which it is only possible to make casual reference, as they can hardly be classified in any important sections. We noticed a considerable import of iodine, and a small one of its preparations. The export is reversed, the value of the raw product being worth £32,000. only, and that of its preparations £169,000. About 40 per cent. was shipped to Russia, Japan and Austria taking moderate quantities. The same thing applies to crude and distilled glycerine, the respective values being £307 000. and £7,500. only. The former shows a very large increase, the value in 1897 having been only £164,000. Of the 12,500,000 lbs. represented by the larger amount, British South Africa took 4,500,000, and the Transvaal 3,500,000. The proportion of this country was small, only some 900,000 lbs Explosives on the other hand declined in value from £215,000. to £185,000., and in weight from 8,000,000 to 6,900,000 lbs. South Africa again easily takes the lead with 1,750,000, or slightly over one fourth, Great Britain, Australia, and Japan figuring for about 1,000,000 lbs each. Gunpowder showed little movement, the figures for 1897 and 1898 being respectively £264,000. and £275,000. It need only be stated that by far the largest part of it went to West Africa to show that it was not, unfortunately, for industrial purposes.

Another instance of reversal between the raw and manufactured product is cinchona bark and quinine. Of the former the shipments were worth less than £12,000., but of the latter £370,000., which showed a decline, however, from £460,000. the previous year. Of the 7,000,000 ounces, the United States took over one third, say, 2,800,000. We purchased rather less than half this quantity, Russia about 800,000 ounces, Italy 500,000, all the others on a much smaller scale.

Germany has an important earthenware and china industry, and has not only learnt to manufacture her own glazes, but to supply them to other countries as well. Thus the shipments of *white lead* were valued at £270,000., against £240,000. the year before. Staffordshire is the destination of a great part of it, as of the 16,500 tons, Great Britain took over 10,000, the United States coming second with about 2,000. Minim or red lead was worth £118,000., as compared with £102,000., and again we were far ahead of any other purchasers, taking five out of seventeen million pounds. This is a trade we need not be envious of, and in face of the revelations recently made, it is to be hoped that ere long it will be a rapidly decaying one, and that some less harmful substitute will be found. Of this there ought to be very little doubt, as ingenuity and humanity will surely triumph in the long run. To white zinc and zinc dust there is perhaps less objection. This, too, is an important item, however—£280,000. as compared with £265,000.—and once more we lead the way with 14,000,000 out of a total of a little over 40,000,000 lbs.

Lime and limestone are included for £185,000. against £180,000., camphor for £60,000 against £70,000, superphosphates for £205, 00. as compared with £175,000., and mineral waters for £375,000., showing no change. Very few of the drugs are yet enumerated separately, but are classed together for £212,000., the same as in 1897. And, finally, there is a great mass of chemical manufactures for industrial purposes, not of sufficient importance to detail specifically in the divisional returns, but of which the value nevertheless reached the very large sum of slightly over £2.500,000. This compares with under £2,300,000. in 1897, and in itself bears ample testimony to the untiring activity of the Germans, both in the laboratory and the factory, as there is practically nothing applicable to any useful purpose that

they are not ready to produce, much of it after having first invented, or at least improved, if not perfected. In comparison, the British chemical industry is insignificant, and, instead of being near the top, is inclining more to the bottom of the list of exports, as far as the first class trades are concerned. Our textile and metal industries are of course too important to entertain any wish to displace them, but at least we ought to emulate the example set us by Germany, and endeavour to place the chemical trade on a much more important footing than it stands at present. We complain of the injury done us by the United States tariff, and offer it as an excuse for a decline in our exports. Germany ignores it, and increases her's in a single year by more than 10 per cent.

SOCIETY OF CHEMICAL INDUSTRY

LONDON SECTION.

CHEMICAL ENGINEERING LECTURES—PROS AND CONS.

THE President of the Society (Mr. Beilby) recently delivered an address before this section on his scheme for fostering the teaching of chemical engineering. Before outlining his proposals he emphasised the fact that in any steps which may be taken by the society it is desirable that the existing organisation and methods should be adapted to the new purpose with as little disturbance as possible. He deprecated the society becoming a pure teaching or diploma-granting body, but it might prepare an outline synopsis of the science of chemical engineering, the outlines to be gradually filled in by means of courses of lectures to be delivered at the various sectional centres. He briefly sketched his synopsis of chemical engineering as he would have it taught in colleges. This was divided into five sections—the first dealing with the conditions to be provided for in chemical operations, the second with the materials used in the construction of chemical apparatus, the third of the apparatus of chemical works, the fourth the planning and erection of chemical works, and the fifth, organisation of works and staffs. Mr. Beilby said he had not mentioned "profits" in his scheme, but it all led up to that: the sole object of chemical industry was to make profits. If a process was unprofitable it was a failure; if research could not make it profitable it was useless, and chemical manufacturers had to keep that one thing, "profit," constantly in view.

Mr. Beilby next suggested that a course of lectures should be established by the society on apparatus and methods. There should be a lecture fund and a lecture committee to prepare a list of chemists and engineers who could and would give lectures on the special subjects indicated in the synopsis of chemical engineering, and submit the synopsis to the Sections, asking them to select items for which they could suggest lecturers, or to arrange for the delivery of lectures during the session. He thought £500. would start the scheme. He also suggested that manufacturers should be invited to present their difficulties to the society with a view to solution, and that prizes should be offered for investigations on special subjects, solutions of difficulties, and for papers on the work of others bearing upon any problem presented. This suggestion has already been considered by the Scotch Section, and as a result the Scotch Paper-makers' Association has agreed to give a prize for the solution of a difficulty. Other manufacturers are to follow suit.

Professor Armstrong was first called upon to speak, and he said that, as an outsider, perhaps he was not the best one to open the discussion, especially as there was much in Mr. Beilby's address with which he could not agree. He did not think that chemical engineering in this country was in such a parlous condition as Mr. Beilby had stated, and after very mature thought on the matter he was convinced that we are ahead even of Germany in scientific education. When, sixteen years ago, he was appointed Professor by the City and Guilds Institute, he had had the plans of the Central Institute completely altered in order that an engineering-department might be put down, and he had to convince the Governors that engineering and chemistry should go together. Professor Armstrong deprecated the Society taking up educational matters, and referred to the difficulties of carrying out Mr. Beilby's scheme. He was perfectly sure that the English student would not fall in with it, although the Scotch student might. He submitted that science schools should be run on workshop lines, a sentiment which met with the strong approval of the meeting. Then he proceeded to tell why the Sections of the Society languish, the most serious reason being that the heads of the Sections do not encourage their employes to attend the meetings for fear of their secrets being divulged. Instead of Mr Beilby's scheme he advocated that British manufacturers should adopt the German method and do research in their own works.

Mr. A. G. Salamon said that Professor Armstrong had struck, in his opinion, the keynote of the discussion when he addressed the meeting as an *outsider*. Professor Armstrong an outsider! One of the leading chemists of Europe outside a society with *three* thousand chemist members! Where were the other professors of chemistry that night when a matter of so much importance to them and their country was under discussion? That was exactly where British chemical industry was behind the German. The professor was not in touch with the manufacturer, nor was the manufacturer in touch with the professor as they knew was the case in Germany. Mr. Salamon proceeded, with the apparent sympathy of the meeting, to tell how difficult it would be for us to make progress in chemical technology in this country until the teachers of chemistry identify themselves more closely with chemical industries. A number of other gentlemen representing most of the other sections of the Society spoke.

The President replied in a neat speech, acknowledging the assistance which some of the views expressed would give him in further elaborating the scheme, but gently suggesting that the observations had been largely critical and not particularly constructive.

LIVERPOOL SECTION.

On Wednesday evening, April 26th, the last sessional meeting of the Liverpool Section of the Society was held under the chairmanship of Mr. Alfred Smetham, and a paper by Dr. J. T. Conroy upon the "Raschen Process for the Manufacture of Cyanide" was read.

This process depends upon the oxidation of a sulphocyanate salt by means of nitric acid, and Dr. Conroy, in the opening part of his paper, dealt with the work of earlier experimenters, and with the chemistry of the changes that occur.

Until Raschen took up the study of the reaction, no one had succeeded in basing a practicable industrial process upon it. And it was only after many difficulties had been surmounted that the process, now working at the Runcorn Old Quay works of the United Alkali Company, was evolved.

The raw material of the process is sodium sulphocyanate. A solution of this is run into hot nitric acid, when the following reaction occurs:—

$$NaCNS + 2\,HNO_3 = HCN + NaHSO_4 + 2\,NO$$

The HCN and NO pass off as gases together with some steam and nitrous oxide—the solution of sodium-hydrogen-sulphate runs away from the series of earthenware jars in which the action takes place. It contains only traces of undecomposed sulphocyanate.

The mixed gases passing off from the decomposing vessels are led through a series of condensers, in which a separation of the constituents in the following order occurs:—Nitrous oxide—steam; hydrocyanic acid—nitric oxide.

The HCN is absorbed by a solution of caustic potash. It is found that an excess of KOH must be maintained in the solution in order to obtain a white product. (For further particulars vide *C.T.J.* Nos. 474 and 499, p.p. 399 and 260) Close attention is required in order to keep constant the conditions of strength, temperature and alkalinity, which favour the highest efficiency of this portion of the condensing plant. The solution of potassium cyainde obtained from the condenser is converted into the solid product by evaporation in vacuum pans.

The nitric oxide is oxidised and recovered as nitric acid by passing into a condenser filled with flints, after allowing the gas to mix with air and steam. The acid solution thus obtained is returned to the process, and losses are made good by slight additions of sodium nitrate and sulphuric acid.

The process is continuous; and though it involves the liberation of two highly poisonous gases, the plants designed for conduct of the operations at Runcorn has proved highly satisfactory, and no case of poisoning has yet occurred.

Votes of thanks to the author, to the directors of the United Alkali Co., and to the retiring members of the Sectional Committee were passed at the conclusion of the paper.

No discussion took place, so that nothing could be elicited concerning cost and efficiency.

[If rumour is correct, the Liverpool committee cannot be congratulated upon their latest reform in the conduct of Sectional meetings. We do not refer to the decision to permit smoking during the reading of papers, though perhaps some of us may think this hardly necessary; but the acceptance of papers with an understanding that no discussion is to be allowed, is a distinctly retrograde step, and one which we hope no other section will imitate, however hard pressed to find suitable papers.—ED. *C. T. J.*]

SULPHURETTED SPRINGS AT RIPON.—Springs similar to those at Harrogate have been dicovered near Ripon. A committee of the City Council are in communication with Lord Ripon as to the proposed terms of sale to that body.

THE NEW U.S.A. SALT CO.—The organisation of the National Salt Company has been completed by the election of officers as follows:—President, A. S. White; vice-president, Geo. W. Young; secretary and treasurer, John Alvin Young; assistant secretary, C. L. Paar; assistant treasurer, R. W. White. It is said that the various plants acquired will be operated for the present in the same way as previous to the consolidation. The offices of the company are in the Standard Oil Building, New York City.

Correspondence.

*** We do not hold ourselves responsible for the opinions expressed by our correspondents.*

FORMALDEHYDE AND FORMALIN.

(To the Editor of the Chemical Trade Journal).

Sir,—A letter from Messrs. J. Norrenberg and Co., which appeared in your last issue, evidently must have been sent to you under misapprehension.

This company first introduced into this country the use of formalin (under this name is understood a far purer product than the ordinary formaldehyde) as a preservative for all organic substances liable to fermentation and decomposition on the strength of their patent No. 21,706 of 1891, and a great number of subsequent patents.

All these patents apply to the use of formaldehyde or formic aldehyde, also called formalin, formol, and other fancy names.

Yours, etc.,

For the Formalin Hygienic Co., Ltd.,
T. Donald Watson, Secretary.

London, May 2, 1899.

FIELD FOR CHEMISTRY IN SUGAR MANUFACTURE.

(*Concluded from p. 239*)

We now turn to the main work of the sugar-house, for which the clarification is a preparation, viz. :

THE CRYSTALLISATION OF THE SUGAR

out of its watery medium, and may pass over the reduction of the juice from its content of 18 per cent. solids and 82 per cent. water to 50 per cent. solids and 50 per cent. water, inasmuch as this is an engineer's problem, and presents few chemical aspects of importance. The continuation of the evaporation, however, in the vacuum pan, where the water is reduced to 5 or 6 per cent., presents a fine opportunity for the study of crystallisation, a phenomenon of yearly increasing interest to the chemical world at large The way the liquor behaves in the pan is the final test of the value of any method of clarification and a check on some methods of extraction. Over 80 per cent. of the total yield of sugar is obtained in this operation, and its proper carrying out is, therefore, of great importance. The study of the effect of high and low temperatures in the steam coils and in the body of the pan affords to-day a very excellent field for investigation. There occurs always in the boiling of the liquor in a vacuum a mysterious and considerable loss of sugar, caused probably, in part, by the action of the heat on the concentrated solution and by entrainment, or the flying of small globules of concentrated liquor upwards to the condenser. As regards the first, much uncertainty exists. As a rule nowadays, steam at about 10 pounds pressure or less is used in the coils for economy's sake, but when time presses, boiler pressure is turned on, and while the amount of available heat is not much greater, the transfer is more rapid from the coil to the liquor. Whether we really lose more sugar with a high temperature in the coils and rapid ebullition than we do at a lower temperature, when the liquor lies closer to the heating surface, is a matter which the chemist can well employ himself with. The excellent work of Dr. von Lippmann in this direction may serve as a basis for further investigation. While the question of entrainment is largely an engineer's problem in which the velocity of the vapour is the principal factor, certain observations made lately in Cuba have led to the belief that entrainment varies much with the nature of the liquor. There always occurs in boiling an entrainment of other matters than sugar, dissolved or suspended in the vapour, a sort of destructive distillation of the non-sugar, as it is called, and it would seem that this leads to a carrying up of crystalline sugar. Further, we do not know as yet whether the entrainment is affected by variations in the temperature and consequently the density of the escaping vapour, the velocity remaining constant.

When a strike of sugar is ready it consists of a mass of crystals, surrounded by a dense syrup, and may at once be centrifugalled, in which process between 60 and 70% of the weight of the masse-cuite is obtained in dry, raw sugar ; or, it may be allowed to cool and crystallise further, in which case from 65 to 75 per cent. of sugar is recovered. A great deal of attention is now being paid to increasing this yield by stirring and cooling the masse-cuite simultaneously for several hours, and thereby promoting the growth of the crystals already formed. This would seem, on the surface, to be a very simple and logical process, but its carrying out requires much care, for there may easily be formed masses of minute crystals (technically know as false grain) whose presence is dreaded in the sugar-house, for either they retard greatly the work of the centrifugals, or they involve a great loss by passing through the baskets with the molasses. At present the machinery in use is merely for a general agitation of the mass, but it has struck me that the directing of the flow of the mass in regular currents might greatly increase the regularity of the growth of the crystals. We have the well-known fact to start with, that a crystal will grow if it gets a chance at the expense of smaller crystals, and that a mutilated crystal, as observed by Wulf, will complete itself before other crystals are formed. The well-known work of Behr on crystalline glucose and, indeed, the daily practical experience at a vacuum pan seem to suggest that we may accomplish much by directing the path of the crystals in their journey through the mother-liquor.

After the greater part of the sugar has been centrifugalled out of the first masse-cuite we have to handle a molasses which contains about 20% of water and 50 to 100% of sugar in solution, the rest being inorganic and organic impurities. By evaporating some of the water—not too much—and either stirring the mass for a few days or letting it stand for a couple of weeks, a considerable quantity of second-grade sugar crystallises out, leaving a lower grade of molasses. The simple thickening of this molasses the second time in the vacuum-pan will allow of still further crystallisation, and whether this is done or more complicated means are resorted to, depends on the machinery at hand and the state of the market. The most successful chemical work of the last decade or two has been done in the treatment of the final molasses of beet sugar-houses. Cane sugar-houses produce molasses of a much lower content of crystallising sugar, and containing a large quantity of invert sugar, which are usually edible, while the presence of great quantities of calcium and potassium salts in the beet molasses render them useless for food and difficult to handle in any way. By Dubrunfaut's osmosis process a quantity of these crystallisable salts may be removed, and the sugar crystals allowed to form, or, by the various saccharate processes, the sugar may be combined with the alkaline earths and precipitated from its solutions These are very beautiful processes chemically. But in all of them, and particularly in a case of strontianite, a great deal of valuable machinery is needed, and the low price of sugar is rendering their use very doubtful from the commercial standpoint. It seems strange that, given a material which, when evaporated to drynesss contains 50 per cent. of sugar, we cannot induce a crystallisation without the expenditure of so much power. Very many attempts have been made to accomplish this by reintroducing the final molasses into the sugar-house, mixing it with the raw juice and carrying it right through to the end ; but this must, after a time, produce a mother-liquor of impracticable bulk. The solution of the problem perhaps will come with a greater knowledge of the crystalline life (if we may use such a term) of an impure sugar solution, and how to mechanically assist the straining for union of the widely separated particles.

The limits of this paper do not admit of dealing at any length with the main problem of the refining of raw sugar, which is its decoloration, and which we may say is produced entirely by the use of animal charcoal. In spite of hundreds of patents for other means, the work of Derosne and Dumont has stood for seventy years or so. Nobody has been able to produce artificially a means of exposing so advantageously the fine particles of carbon to the action of the liquor as the curious phosphatic skeleton of the bone affords us, allowing us, as it does, at the same time to collect so easily the carbon from the liquor after use and revivify it. There is no field of research which might perhaps repay the investigator better than that of the decolorising of sugar-liquors, but anybody who undertakes this had better post himself thoroughly in the literature of the subject, for many surprising laboratory results have been obtained already whose practical value is nil.

In conclusion, it may be said that whatever process a chemist may evolve for the improvement of the sugar industry, must be subjected to the most severe practical tests before its adoption will be even considered by the manufacturers in general. All raw sugar-houses now work at very high pressure. They differ from other manufacturing establishments in that they are idle a great part of the year, and they must work at all speed for a few months to get through their perishable raw material. Even a few hours' stoppages may entail a serious loss, and therefore speed and smoothness are primary considerations in the working of any new process. There is a case known of an irate planter, whose work was delayed by a new process, using dynamite one fine morning on the apparatus to clear the path for the resumption of his old system.

Further, the actual value in dollars and cents must be clearly set forth, or the discoverer be satisfied with the scientific value of his work only. Sugar-makers are every day getting pretty circulars about how to get all the sugar out of the raw juice as first product, and similar impossible things, but business-like statements of income and expenditure are rare indeed.

Parliamentary Jottings.

FRITTED GLAZES IN THE POTTERY TRADE.

In the House of Commons, on Monday, Sir M. White Ridley informed Sir C. Dilke that the master potters had definitely undertaken to use in future for glazes only fritted lead, but they had asked that those of their number who had had no experience in fritted glazing might be allowed a reasonable time to master the practical points. This request seemed reasonable. As already stated, he proposed to amend the special rules for this trade in order to give effect as far as practicable to the recommendations of the experts.

OZONE IN THE HOUSE OF COMMONS.

Sir J. Leng (Dundee) asked the First Commissioner of Works whether the attention of his department had been directed to the possibility of supplying ozone to the House of Commons when members were not sitting; and whether, in view of the numerous cases of influenza among members and officials during the present session, he would consider the advisability of nightly disinfecting the House by the introduction of an element said to be fatal to insanitary microbes.

Mr. Paulton (Durham, Bishop Auckland) asked whether the right hon. gentleman had considered the advisability of establishing a fumigating chamber for the use of such hon. members as desired it. (Laughter.)

Mr. Akers-Douglas: I have caused the plant necessary for the manufacture and introduction of ozone to be inspected. The methods and practical merits of the process do not appear to me to be as yet sufficiently established. The cost of a complete installation at the Houses of Parliament would be some thousands of pounds, and the electrical pressure required for working it is no less than 12,000 volts. (Laughter.)

Sir J. Fergusson (Manchester, N.E.) asked whether the right hon. gentleman had considered the expediency of opening the windows to admit fresh air into the House before it assembled?

Mr. Akers-Douglas: I shall be very happy to consider that. I believe the windows are opened. I have been down to the House several mornings to see whether this has been done, and I have found that the windows have been opened.

MERSEY AND IRWELL JOINT COMMITTEE.

PENALTIES AGAINST MANCHESTER TO BE PRESSED FOR.

A MEETING of the Mersey and Irwell Joint Committee was held on Monday at the offices in Mosley Street, Manchester, Mr. Vernon K. Armitage presiding. A letter was read from the Town Clerk of Manchester in which a further delay was asked for, in view of the Local Government inquiry which is at present being held, in regard to the summons for penalties to be issued against the Corporation for the pollution of rivers. Sir J. T. Hibbert, chairman of the Committee, sent a letter, with an enclosure from Sir Bosdin T. Leach. Sir John suggested a short postponement of the summons on the part of the Committee. The postponement suggested by the Town Clerk was till Whit-week, when Mr. Balfour Browne, Q.C., would be able to represent the Corporation.

Mr. T. W. Killick said that at the last meeting of the Committee they desired to go on with the summons for penalties against the Corporation, because the Manchester effluent was a very bad one, and also because Manchester was alone of all the boroughs in the watershed in not taking practical steps to improve the effluent. When the resolution was passed the inquiry of the Local Government Board had been adjourned *sine die*. Since then, however, the Rivers Committee had caused that inquiry to be resumed. He spoke for every other member of the Joint Committee when he said that they had the most sincere sympathy for the Corporation Rivers Committee, and had an entire belief that that Committee was doing its best in trying to find some way of purifying the Manchester effluent. But it was Manchester itself, and not the Rivers Committee, that they had to deal with. They had had from time to time statements, assurances, he might say promises, from the Rivers Committee, which either the Manchester Corporation or the Manchester citizens had not adopted or had not allowed to be carried out. The very last thing to be done by the Corporation was to refer matters back to the Committee. Under these circumstances they

COULD NOT ALLOW ANY MORE ADJOURNMENTS.

Adjournments had been going on from time to time almost for a year, and the Joint Committee, in fairness to themselves, and acting from the point of view not of expediency merely but of right, ought to carry the matter before Mr. Yates. He moved therefore that penalties against the Corporation be pressed for by the Joint Committee.

Dr. Hewitt, in seconding the resolution, said the Committee was not a judicial body, and the matter ought to go before the proper court. The Committee had done all that was possible to meet Manchester, and to give Manchester time. It was the Corporation itself and not the Rivers Committee of the Corporation that was responsible. There were signs that the Rivers Committee had not that support from the Corporation which was due. That being so the matter should go before the Judge, who would hear both sides of the question. The Joint Committee ought not to rest while Manchester was doing nothing. Manchester was the only Corporation that had not sanctioned a scheme to be put into operation.

Mr. Harry Grimshaw moved that the matter be left over till the next meeting of the Joint Committee. It was quite evident, he said, that neither the Rivers Committee nor the Corporation could adopt a scheme till the present Local Government Board inquiry was finished, for the inquiry had reference to the principle of a scheme. Till that principle was sanctioned they could not proceed. It was true, as Dr. Hewitt had said, that the Rivers Committee had been subject to interference from the Council, but they would lose nothing by this short delay.

Mr. Alderman Jenkins, in seconding the amendment, pointed out that Parliamentary business would take the legal advisers of the Council to London next week.

Mr. Alderman Cheetham supported Mr. Killick's resolution. The City Council, he urged, ought to be compelled to do something in support of the Rivers Committee.

Mr. A. H. Scott, in supporting the amendment, said the adjournment of the Local Government inquiry till now had been due to the fact that statistics with regard to storm water had had to be prepared and analyses made. He agreed that the Rivers Committee had not had that support from the Corporation which they ought to have had.

Mr. Alderman Garnett said irresponsible members of the Council were the cause of the delay, and the Joint Committee should therefore press the matter on.

Mr. Alderman Brierley supported the resolution, while extending his sympathy to the Rivers Committee.

The Chairman associated himself with this sentiment.

IT WAS A SAD SIGHT,

he said, to see a good Committee wrestling with adversity, and their sympathy would be best expressed in strengthening the hands of the Committee by pressing for penalties. He was afraid the kindness of the Joint Committee in granting repeated adjournments had been taken as a sign of weakness. He thought the idea of adjourning the case to Whit-week, of all other weeks, was a bit ridiculous. He supported the motion that the Clerk be instructed to take action in accordance with the resolution of the Joint Committee.

The amendment was put and declared lost, only four members supporting it. The resolution was adopted.

[For report on the hearing of the summonses see page 297.]

Trade Notes.

A NEW TAR DISTILLERY.—A new tar distilling works is about to commence operations at Sharpness, Gloucestershire, the owners being the Sharpness Chemical Company. The plant will be capable of dealing with large quantities of tar; and the works are well situated on rail and water, besides being convenient to markets.

GUANO FROM THE PACIFIC ISLANDS.—At a recent meeting of the Pacific Islands Co., Ltd., the Chairman stated that Mr. Arundel, the vice-chairman, had visited various parts of the world during the past two years on the Company's business, and had paid three visits to Clipperton Island, the result being the acquisition by the Company of this valuable guano deposit (a concession having been obtained from the Mexican Government), and the starting of operations on the island. In a short time it was expected that large, profitable, and continuous exportations of guano would be made.

FLEXOID.—A new substance has been introduced under this title which promises to find considerable application in trade and form a rival to celluloid, xylonite, and similar products. It is said to be transparent, flexible, waterproof, not liable to spontaneous combustion, and forms a good electrical insulator. It can be rolled, pressed, moulded, or turned into various fancy and useful articles, or made into transparent sheets, which are flexible and retain their flexibility and flatness when immersed in water and dried. The films will be used in photography and for the cinematograph; for the latter forming a fireproof film, and thus removing the need for restrictions on cinematograph entertainments. These transparent films, which are also made in a variety of colours, will be used for a waterproof and airproof packing material for packing fancy goods—such as tobacco, confectionery, photographic materials, and as substitutes for oiled silks in surgery. Flexoid is likewise capable of rendering paper or cloth waterproof without altering their appearance.

Mill Owners and River Pollution.—This week at the Police Court at Saddleworth, decisions were given in the prosecutions by the West Riding Rivers Board of three mill-owning firms—Chambley, Buckley, and Lawton, for alleged pollution of the River Tame. The prosecution urged that a goyt was a stream within the meaning of the Act. The Chairman remarked that that would stop all the Yorkshire mills. The Bench's opinion was divided, and a re-trial of the two latter cases was ordered, Chambley being fined 20s. and costs.

Manchester's Gas Bye-Products.—At a meeting of the Gas Committee of the Manchester Corporation on Monday, it was resolved to take steps at once in accordance with the permission of the Local Government Board, given some time ago, for the borrowing of £25,000. for the purpose of erecting buildings and plant for the manufacture of their own sulphate of ammonia. The buildings will be erected at Bradford Road works, and the ammoniacal liquor will be brought in pipes from the Rochdale Road works and by tank barges along the canal from the Gaythorn works. Hitherto the liquor has been bought by contract from local firms who have manufactured it, and it is partly in consequence of complaint as to the alleged nuisance arising from such private manufacture that the Committee have taken this step. The Local Government Board have specified that the new departure should not mean a loss to be borne by the ratepayers.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are still most discouraging. Things are not quite so bad with 50/90's, but the position of 90 s is growing desperate. Present quotations are 7¼d. to 7½d. for 90's and 7¾d. for 50/90's. Carbolic acids keep fairly steady, without change in prices, reports as to the tendency of the market being highly contradictory. Naphthas are quiet, solvent being unchanged, while quotations for crude are purely nominal, transactions being at a standstill. Pitch steady at 26s. 6d. to 27s. 6d., f.o.b. East Coast. West Coast unchanged.

Sulphate of ammonia is a firm market, and prices are advancing in a most satisfactory manner both for prompt and forward business. Closing values are: --Beckton, £11. 5s.; London (outside makes), £11. 7s. 6d.; Hull, £11. 5s.; and Leith, £11. 7s. 6d. For Nov.-April £11. is asked at Leith.

MISCELLANEOUS CHEMICAL MARKET.

A fairly steady business continues to be done in alkalies, and prices all round are well maintained, though the level of values cannot be considered as yet satisfactory to makers. Bleaching powder is in fair request, both for prompt and forward shipment, at £5., f.o.b. Liverpool, hardwoods, and for softwoods, free on rails, £4. 2s. 6d. to £4. 5s. per ton is the current quotation. Chlorates of soda and potash do not move in price, and are still at 3¾d. and 3½d. per lb. respectively. Alkali, 58%, £3. 17s. 6d, bags, f.o.r. Soda crystals and bicarbonate firm. Leblanc ash nominal at 1⅛d. per degree, f.o.b. For sulphate of copper there is a continued good demand, and price is now £26. 10s., f.o.b, for prompt and early shipment. Saltcake is a little irregular at 27s. to 29s., in bulk, f.o.r. There is a fair quantity of caustic soda moving, but values are unaltered, viz., f.o.b. Liverpool, 77%, £7. 12s. 6d.; 74%, £7. 7s. 6d.; 70%, £7.; 60%, £6. nett per ton. Sulphur steady at £4. 12s. 6d. per ton. Potash, caustic and carbonate, are in somewhat better request, and prices have a slightly improving tendency. Brown acetate of lime quiet at £4. 15s. to £4. 17s. 6d., c.i.f.; grey firm at £8. 5s per ton, ex store. Acetic acids in all grades are practically unchanged. In acetate of soda there is rather more doing at £12. 15s. to £13. per ton. Owing to large stocks the price of foreign white sugar of lead has rather a drooping tendency—current quotations being £24, ex store. Nitrate of lead £22. to £22. 10s. per ton In white powdered arsenic there is somewhat of a scarcity, and price is firm at £18. 10s. to £19., according to brand. Muriate of ammonia is irregular, and sales are reported below the nominal quotation of £19 10s per ton. Yellow prussiate of potash firm at 8d. per lb.; soda 6¼d. per lb. Borax is fairly steady at £15. 10s. to £16. per ton. Boracic acid £26. 10s. per ton Sulphocyanides are neglected, and prices unchanged. In nitrate of soda there is good business reported, and price maintained at 8s. to 8s. 3d. per cwt. Bichromates are offering at 3½d. and 2¾d. per lb. respectively for potash and soda. Tin and zinc salts are dearer. In general chemicals for the textile trades business is not particularly active.

LIVERPOOL OIL AND COLOUR MARKET.

Wednesday.

OILS.—Palm oil is quiet there being scarcely any business to report. Olive continues firm with Spanish quoted £31. to £31. 10s. per tun. Linseed quiet at 18s. 9d. to 19s. 6d. for Liverpool makes in export casks. Cottonseed dull, but prices still keep at 17s. to 17s. 6d. cwt. for Liverpool refined. Castor oil is steady for good seconds Calcutta at 2⅞d. to 2 1/16d., and first pressure French 2¾d, but for shipment the market is firm and sellers are not offering. Tallow is slow to move but prices keep pretty much at the same level. Resin is steady and without change to record in prices for all grades. Spirits of turpentine are in fairly good demand at 36s. cwt. Petroleum firm at 6d. to 7¼d. for American; and Russian refined, 5¼d. to 5¾d. per gallon.

CAKES.—Only a quiet trade has been effected in American Western linseed on the spot, but the quotation is without alteration at £5. 15s. to £6. 5s. Supplies of other imported descriptions continue in a limited compass, and trade is retail in extent at former currencies, viz, £6. 10s. to £6. 15s. for River Plate, £7. 2s. 6d. to £7. 3s. 9d. for Bombay, and £7. 5s. to £7. 7s. 6d. per ton for Russian. Liverpool makes have been in only very moderate request at a partial decline of 5s., sellers now quoting £7. 12s. 6d. to £8. 5s. per ton, according to brand. Good to choice brands of American decorticated cottonseed are steady in tone, but there is not much doing at the moment, and the quotation is repeated at £5. 10s. to £6., according to quality, but Liverpool makes are in moderate request, and remain steady at £6. 5s. to £6. 10s. per ton, according to brand. In undecorticated Liverpool makes there has been a moderately fair trade concluded at former currencies, sellers still quoting £4. 15s. to £5. 5s. per ton, according to brand. Only moderate sales are reported in spot lots of Egyptian at £4. 7s. 6d., with retail sales up to £4. 10s. per ton, the tone being rather quiet.

COLOURS.—Prices are steady, and practically without change. Ochres: Oxfordshire—common £10., medium £12., best £15.; Derbyshire—common 40s., medium 50s., best 60s.; Welsh—best 90s. seconds 50s., and common 18s.; Devonshire, 40s. to 45s.; French, J C, 65s. Umber: 40s. to 45s. White lead: £16. Red lead unchanged. Venetian red: £6. to £10. Cobalt: Prepared oxide, 9s 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7., medium, £10.; finest, £20.; Zinc oxide: £22. 10s. to £25.

THE METAL MARKETS

LONDON, Wednesday.—Pig iron active: Scotch Warrants closed at 63s., Middlesbrough, 54s. 4½d., cash, and hematite, 63s. Copper firm: Chili bars, G.O B.'s and G.M.B.'s, closed at £76. 5s. to £76. 10s. cash, and £76. 2s. 6d. to £76. 7s. 6d., three months. Tin firm: Straits closed at £117. to £118. cash, and £118. 5s. to £118. 15s. three months; Australian, £121. 10s., English ingots, £121. to £121. 10s. Lead steady: Spanish, £14. 2s. 6d.; English, £14. 6s. 3d. Silesian spelter, ordinary, £28. 10s. Nickel, 1s. 2½d. Antimony, £39. to £39. 10s. Quicksilver: first hands, £8. 2s. 6d.; second hands, £8. 1s. 6d. *Copper Shares* steady: Cape, 4 3/16 to 4 5/16; Copiapo, 3¼ to 3⅜; Libiola, 2⅛ to 2⅜. Mason and Barry, 4¼ to 4⅜; Rio Tinto, 49 1/16 to 49 5/16; Tharsis, 9⅛ to 9⅜.

GLASGOW, Wednesday.—Market flat, and a large business. Scotch done at 63s. 10d., 63s 6d., and 63s 11d. cash; also at 63s. 9d., 62s. 9d., and 63s. 1d. month buyers, 62s. 10d. cash; Cleveland done at 54s. 7d., seven days; also at 54s. 9d., 54s 6d., and 54s. 9d. month; buyers 54s. 4½d. cash. Cumberland hematite done at 62s. 6d, 62s. 10½d., and 62s 10d. cash; also at 62s. 9d. month; buyers, 62s 9d. cash; sellers, 62s. 10½d. Middlesbrough hematite, idle.

HULL PAINT, OIL, AND COLOUR REPORT.

Tuesday.

OILS.—The vagaries of cottonseed and cottonseed oil appears to be responsible for a good deal of financial difficulty amongst crushers here, who do not stand a ghost of a chance in speculation, being dependent upon the seed broker upon one side and the oil broker upon the other, both alike interested in enhancing prices. The broker is the financial "maggot" of legitimate industry, whose wings should be severely clipped if the syndicate so long talked of becomes *fait accompli*, whose arrangements, it is given out, are nearing completion with the best mills here. The principal imports to date have been, as against the same time a year ago:—Linseed, 147,887 qrs. against 113,609 qrs.; rapeseed, 44,377 qrs. against 25,077 qrs.; cottonseed, 66,528 tons against 94,089 tons; oilcake, 8,974 tons against 6,959 tons; olive oil, 1,052

tuns against 2,120 tuns; tar, 1,048 barrels against 705 barrels. Refined cottonseed oil, 15s. 6d. to 15s. 7½d. per cwt., naked, spot, and to August; extra pale filtered oil, 16s. 6d. naked; crude, 14s. 3d. to 14s. 6d.; casks, £1., and ordinary barrels, £1. 10s. per ton extra. Linseed oil, 16s. 10½d., spot, naked; 16s. 6d. June/August; 15s. 10½d. last four months; boiled and refined, £1. to £1. 10s. per ton extra. Olive oil from £31. 10s. (for Candia) to £33. Colza oil, 23s. 6d. to 24s. 6d. for Stettin. Olive oil soap from £15s. 10s. per ton. Sulphur oil (olive), 20s. Cod oil, £16. to £18. per ton. Castor oil, extracted here, cold drawn, 27s. 3d. in barrels; 3¼d. per lb. in cases; pure first pressure, 24s. 9d. cwt.; in cases, 2 15/16d. per lb.; second pressure, 23s. 9d. per cwt.; in cases, 2 7/16d. per lb.; French castor oil is quoted, first pressure, 26s. Oleines firm and unchanged from £18. 10s. to £21. in barrels. Resins unchanged. Turpentine, 36s. to £36s. 6d.

CAKES.—The market values of linseed cakes are easier, yet some mills are stopped, awaiting arrivals of seed, the quotation being:—Linseed cakes steady at 2s. 6d. per ton decline; 95% pure, £7. 5s. to £7. 7s. 6d. Oilcakes (linseed), £6. 5s. to £6. 7s. 6d. per ton; Russians, £6. 15s. to £7. 5s. Cotton cakes very firm, demand small; best makes, £5. 2s 6d. to £5. 5s.; seconds, £4. 17s. 6d. to £5.; decorticated, £6. 5s.; meal, £5. 15s. Rape cakes, Black Sea, £4. 2s. 6d.

PAINTS.—The demand will be much affected by the strike, prices unchanged.

TYNE CHEMICAL REPORT.

TUESDAY.

Chemicals are dull, and new business is coming in slowly. Shipments have been rather better during the past month. Soda crystals are unaltered at £2. 12s. 6d. per ton, gross weight, locally. Caustic, 70%, £7., and 76/77% £8. per ton. Sulphur steady at £4. 12s. 6d. per ton, f.o.b.

Bleaching powder, softs, £5. 10s. per ton, nett; do., hards, £5. 15s. per ton, nett; caustic soda: 76/77% £8., and 70% £7. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48% £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75°Tw., £2. 12s. 6d. per ton, nett; do., 100°Tw., £3. per ton, nett; do., 140°Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. od. per ton, nett; blanc fixe, £6. 10s. per ton nett; chloride of barium, refined crystals, £6. 15s. od. per ton, nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt unchanged at 9s.6d. per ton, f.o.b. Tees.

COALS.—The coal market is strong, with an increasing demand for steam coals for Baltic and Russian ports. The miners' strike in Belgium has also had the effect of stiffening prices on this side, and there are rumours of several large transactions for shipment to the Continent. Best Northumbrian steam, 13s. to 13s. 6d. per ton; second qualities, 12s. to 12s. 6d. per ton; small steam, 8s. to 8s. 6d. per ton; bunker coals, 9s. 3d. to 10s. per ton; gas coals, 10s. 6d. to 11s. per ton; coke, 25s. to 26s. per ton.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

On the whole the market quite retains the slightly increased firmness exhibited since the advent of the new season. With the exception of saltcake, nitrate of soda, and some of the lead products, which are easier, the main lines of the market show either steadiness at the old prices or an inclination to the rise. Sulphate of copper is again dearer, and sulphate of ammonia has during the week received quite an accession of strength, particularly in transactions for forward delivery, for which, it is said, £11. has been paid. The spot value to-day, f.o.b. Leith, is £11. 5s., and makers firm at that. Mineral oils and paraffins are all as before. On Thursday last the first of the oil companies (the Broxburn) announced result of year's working up to close of March. Ordinary shareholders this year are to get 8½ per cent., which is an advance of 1 per cent. on the figures for the two foregoing years, and on the whole a very satisfactory outcome.

Chief prices current are:—Soda crystals, £2. 5s. to £2. 7s. 6d. basis nett, Tyne; soda ash, £4. 2s. 6d. to £4. 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 5s. to £4. 15s. nett, Glasgow; caustic soda, white, 74° £7. 7s. 6d., 70/72° £7., 60/62° £6., and cream 60/62° £6., all nett, Liverpool; bleaching powder, 35/37°, £5. 5s. to £5. 10s. nett, Tyne; saltcake, 28s.; borax, English refined, £16., and boracic acid, £26. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s., nett, Liverpool; bichromate of potash, 3½d., less 6% for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d., less 6% for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow); chlorate of potash, 3⅜d., less 5% Liverpool; nitrate of soda, 8s. 1½d. to 8s. 4¾d.; sulphate of ammonia, £11. 5s. prompt, f.o.b., Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £26. 5s., less 5% Liverpool; paraffin scale, hard, 1⅞d. to 2d. per lb., and soft 2d. per lb.; paraffin wax, 120° semi-refined, 2¼d. to 2½d. per lb.; paraffin spirit (naphtha), 9d. to 9½d. per gal; paraffin oil (burning), No. 1, 6¼d.; and crystal, 6¾d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 15s. to £5. 5s., 885° £5. 10s. to £6., and 890/895° £6. 5s. to £6. 10s. Week's imports of sugar at Greenock were *nil.*

New Companies.

Bedingfield Soap Co., Ltd.—CAPITAL £3,000. in £1. shares. This company has been formed to acquire and carry on the business of a soap manufacturer and merchant carried on by C. H. Bedingfield, of Bristol. Registered office, 31, Redcliff-street, Bristol.

John Calabrese & Co., Ltd.—CAPITAL £11,000. in 10,000 pref. and 1,000 founders' shares of £1. each. This company has been formed to adopt an agreement with J. Calabrese, and to carry on the business of insect powder and vermin killer manufacturers, chemical manufacturers, chemists, druggists, etc.

St. Cuthbert's Lead Works, Ltd.—CAPITAL £25,000. in £1. shares. This company has been formed to acquire, work and carry on certain lead mines and other property at St. Cuthbert's Wells, Somerset, known as The Cuthbert's Lead Works. The subscribers to the memorandum of association are:—E. Sorrell, 50, Idmiston-road, Stratford, E., clerk; F. Morton, 53, Nunhead Grove, S.E., surveyor; R. Humphreys, 39, Berger-road, S. Hackney, clerk; S. E. Newman, 72, Komilly-road, Finsbury Park, N., clerk; P. J. Taylor, 23, Cleveland road, Barnes, S.W., solicitor; G. Beeson, 2, Clarendon Terrace, W., clerk; A. W. Kemp, 11, King's Place, Boro' High-street, S.E., clerk. Registered office, 110, Cannon-street, E.C.

Grosny Petroleum Co., Ltd.—CAPITAL, £50,000. in £1. shares. This company has been formed to acquire any petroleum or oil-bearing lands in Russia or elsewhere, to sink wells and make borings, to deal in and refine petroleum and other oils and their products. The subscribers to the memorandum of association are:—A. J. W. Lawson, 43, Forest Drive West, Leytonstone, secretary; W. E. C. Baynes, 1, Bell Yard, E.C., gentleman; J. M. Lickfold, 33, Brunswick Square, W.C., journalist; E. S. Harper, 3, Shawbery-road, E. Dulwich, S.E., clerk; J. A. Fuller, 50, Chatterton road, Finsbury Park, N., sec.; H. W. Brown, 59, Mackenzie-road, Beckenham, gentleman; S. A. Tyabjee, 16, Upper Addison Gardens, Kensington, gentleman.

Canada Petroleum Co., Ltd.—CAPITAL, £300,000. in £1. shares. This company has been formed to adopt an agreement with the London and Dublin Finance Corporation, Ltd., and to produce, refine, store, supply and distribute petroleum and petroleum products in the county of Gaspe, Quebec, Canada, or elsewhere. The subscribers to the memorandum of association are:—R. M. Albery, Bowery Farm House, Wraysbury, Bucks, farmer; F. B. Harper, 15, Old Jewry Chambers, E.C.; S. Stickner, 15, Somerville-road, New Cross, S.E., clerk; H. E. Hill, 182, Leander-road, Brixton Hill, S.W., clerk; E. W. Heppell, 60, Gresham-street, E.C., law stationer; O. Dunsing, 419, Strand, W.C., clerk; F. Viller, 14, Kitto-road, St. Catherine's Park, S.E., writer.

IMPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.

Week ending April 22nd.

Acetone—
Germany, 10 dms. J. Norrenberg & Co.

" 1 R. W. Greeff & Co.
" 11 pks. Petri Brs.

Alkali—
France, 190 c. J. Barber & Co.

Belgium, 300 Leach & Co.

Alum—
Holland, 450 pks. J. White

Aluminium Sulphate—
Belgium, £86 Tough & Henderson

Ammonia—
Holland, £30 F. Boehm

Ammonium Nitrate—
Holland, £280 S. E. Rly. Co.

Ammonium Sulphate—
France, 20 t. E. Groschkes.

Antimony Ore—
Bastia, 35 t. Novelli & Co.
Austria, 20 Bellamy's Wf., Ld.

Arsenic—
Melbourne, 75 pks. W. & S. Bowditch

Barium Chloride—
Germany, 88 pks. Petri Brs.

Barium Peroxide—
Germany, 9 pks. H. Johnson & Sons

Barium Sulphate—
Germany, 87 pks. J. L. Lyon & Co.

Barytes—
Holland, 43 pks. Wilkinson, Heywood & Co.
,, 56 H. Lambert
,, 28 W. H. Carey & Sons

Bleaching Powder—
Holland, 45 pks. J. M. Steel & Co.

Caoutchouc—
Germany, 1 c. Hale & Son
U. States, 15 Lewis & Peat
E. Indies, 70 ,,
Colon, 3 Royal Mail S.S. Co.
,, 1 Prop. Bull Wf.
Straits, 45 H. T. & I. R. Wks., Ld.
,, 182 E. Boustead & Co.
,, 58 W. Pope & Co.

Castor Oil—
Italy, 10 cs. R. Quincey & Sons
Belgium, 25 brls. W. Montgomery & Co.
France, 35 pks. F. Boehm
,, 72 brls. Lucas & Spencer's Wf., Ld.
E. Indies, 14 cks. J. W. Cook & Co., Ld.
,, 5 J. Forsey
Italy, 5 brls. A. Laming & Co., Ld.
,, 20 cs. A. & M. Zimmermann

Caustic Potash—
Germany, 18 pks. Sth. Devon Wf. Co.
France, 20 Petri Brs.

Chemicals *(otherwise undescribed)*
Germany, £150 H. Lambert
Holland 5 Phillips & Graves
Germany, 1 pk. Davies, Jones & Co.
,, £25 Argo S. S. Co.
,, 620 L. & I. D. Jt. Co.
,, 7 R. W. Greeff & Co.
Holland, 20 ,,
Belgium, 174 T. Palmer
,, 6 Leach & Co.
,, 37 John Cockerill Line
U. States, 520 H. Blanchard
Germany, 160 Craven & Co
France, 82 Mory & Co
Belgium, 690 T. H. Lee
Germany, 613 A. & M. Zimmermann
,, 14 G. C. Wyman & Co.
Holland, 8 T. H. Lee

Citrate of Lime—
Italy, 42 pks. 46 cks. B. Jacob & Sons

Coal Products—
Tar
U. States, 100 brls. Lon. & Til. Light C. & D. Co.

Copper Sulphate—
Manila, 326 cs. Elkan & Co.

Cream of Tartar—
France, 8 pks. C. Atkins & Nisbet
,, 3 Blackmore, Leconte & Co.
,, 30 W. C. Bacon & Co.
,, 16 F. C. Devon & Co.
Holland, 5 Kirkpatrick, Barr & Co.
France, 5 B. & F. Wf. Co., Ld.
Spain, 15 ,,

Dyestuffs—
Argols
Spain, 40 pks. Thames S. T. & L. Co., Ld.
Italy, 100 ,,
,, 1,006 B. Jacob & Sons
Cape, 36 W. Kemsley & Co.
Extract
Holland, 50 pks. J. Norrenberg & Co.
France, 283 T. H. Lee
,, 100 Millers Tanning Extract Co.
Canada, 330 Boutcher, Mortimore & Co.
U. States, 10 W. Burton & Sons
Gambier
Straits, 686 pks. Brinkmann & Co.
,, 167 Union L. Co., Ld.
,, 280 Beresford & Co.
,, 252 J. Greig
Indigo
Belgium, 1 cht. Leach & Co.
Germany, 1 srn. L. & I. D. Jt. Co.
E. Indies, 11 cs. Gray, Dawes & Co.
,, 36 chts. Croysdale & Co.
,, 18 Arbuthnot, Latham & Co.
,, 44 Park Macfadyen & Co.
,, 35 J. W. Cook & Co., Ld.
,, 10 J. Owen
,, 6 Kaltenbach & Schmitz
,, 10 L. & N. W Ry. Co.
,, 80 Lewis & Peat
,, 72 L. & I. D. Jt. Co.
,, 3 Parry & Co.
,, 2 Parsons & Keith
,, 10 Arbuthnot, Ewart & Co.
Myrabolams
E. Indies, 1,361 pks. W. Shelcott & Sons
,, 769 A. B. Curtis & Co.
,, 683 G. S. N. Co.
,, 683 H. J. Perlbach & Co.
Naphthaline
Germany, 24 pks. Fleming's Oil & Chemical Co.
Orchella
Ceylon, 4 pks. R. G. Hall & Co.
Shumac
Italy, 1,000 pks. J. Kitchin, Ld.
,, 880 R. Waters
,, 150 A. Hartrodt
Tanners' Bark
Natal, 55 t. Flack, Chandler & Co.
,, 13 Union L. Co., Ld.
Cape, 15 J. Greig
Adelaide, 100 ,,
Auckland, 13 Beresford & Co.
,, 14 H. Johnson & Sons
Tannin Extract
Germany, 10 pks. R. W. Greeff & Co.
Tumeric
E. Indies, 350 pks. L. & I. D. Jt. Co.
,, 160 H. A. Litchfield & Co.
,, 7 Gray, Dawes & Co.
China, 57 R. Warner & Co.
Cochin 105 Lon. & Til. C. & D. Co., Ld.
Valonia
A. Turkey, 50 t. J. J. Greenstreet

Dyestuffs *(otherwise undescribed)*
France, 3 pks. Bennett S. S. Co., Ld.

Farina—
Austria, 14 pks. Bellamy's Wf., Ld.
Belgium, 4 Sawyer, Sons & Co.
Italy, 2 L. Perroni
Germany, 33 J. Barber & Co.
,, 100 Seaward Brs., Ld.
Holland, 100 R. Bennett & Co.
France, 43 Lon. & Til. Ltge. C. & D. Co., Ld.
Holland, 102 pks. J. Knill & Co.
,, 100 Thames S. T. & L. Co., Ld.
,, 200 J. Barber & Co.

Glucose—
U. States, 3,075 pks. 14,505 c. R. G. Hall & Co.
,, 500 500 M. D. Co.
France, 420 400 L. Norman & Co., Ld.
U. States, 100 583 J. Keiller & Son, Ld.
,, 200 880 L. Norman & Co., Ld.
,, 50 293 Thames S. T. & L. Co.
,, 50 310 A. B. Curtis & Co.
Germany, 25 204 Beresford & Co.
,, 13 105 J. Knill & Co.

Glue—
Holland, £90 Davies & Sons
Germany, 60 L. & I. D. Jt. Co.
Belgium, 11 Leach & Co.
France, 62 W. Harrison & Co.
Belgium, 100 T. Ronaldson & Co.
Holland, 50 G. S. N. Co.
France, 715 T. M. Duche & Sons
Belgium, 1,233 ,,
Italy, 200 ,,
France, 72 Mory & Co.
Germany, 80 M. H. Voss
France, 240 Lon. & Til. Ltge. C. & D. Co., Ld.
Holland, 13 T. H. Lee

Glycerine—
Germany, £25 R. W. Greeff & Co.
Holland, 410 J. Barber & Co.
France, 310 H. Hill & Sons

Guano—
G.W.Africa 920 t. A. Hunter & Co

Gutta Percha—
Straits, 100 c. L. & I. D. Jt. Co.
,, 530 Prop Bull Wf.
,, 700 H. W. Jewsbury & Co.

Manganese Ore—
Holland, 10 c. J. Barber & Co
Germany, 10 ,,
,, 16 t. C. Hof & Co.

Manure—
E. Indies, 193 t. Vokins & Co., Ld.
,, 50 E. Packard & Co.
,, 200 Munro & Liddells
,, 250 Fox, Roy, & Co.
,, 440 A. Hunter & Co.
,, 20 ——

Methyl Alcohol—
U. States, 55 dms. H. Wallace & Co.
,, 100 brls. Parker & Co.
France, 20 cks. E. Catlin
Germany, 14 dms. Tingle, Jacobs, & Co.

Molasses—
U. States, 400 cks. 2,254 c. J. Forsey
,, 100 530 Simons & Co.
,, 900 5,074 Falkenburg & Hesse

Ochre—
Holland, 59 pks. Phillipps & Graves
Italy, 25 Hemingay & Co.
,, 15 W. Harrison & Co.
France, 187 ,,
,, 115 Smiths & Co.
Spain, 50 Blundell, Spence, & Co., Ld.

Paraffin Wax—
U. States, 200 brls. H. Hill & Sons

Phosphates—
Belgium, 50 t. J. E. Kitton
,, 280 Odams Chemical Manure Co.
France, 119 T. S. Price & Co.
Holland, 210 West & Penrose

Potash—
Germany, 31 pks. J. M. Steel & Co.

Potassium Bicarbonate—
Holland, 13 pks. A. & M. Zimmermann

Potassium Carbonate—
Germany, 6 c. H. Lambert
,, 5 t. Petri Brs.
France, 4 ,,
,, 4 J. A. Reid

Potassium Sulphate—
Germany, 500 pks. Bessler, Waechter, & Co.
France, 50 Charles & Fox

Red Lead—
Germany, 6 pks. H. Lambert

Rosin—
U. States, 100 brls. H. Hill & Sons

Salammoniac—
Germany, £30 F. Boehm

Saltpetre—
E. Indies, 335 bgs. Lucas & Spencer's Wf.
Belgium, 150 S. E. Rly. Co.

Salicylic Acid—
Germany, 32 pks. Butler's Wf., Ld.

Soda Crystals—
Belgium, 29 c. Wilson & Co.

Sodium Hypochlorite—
Germany, 200 pks. H. Lambert

Sodium Nitrate—
Chile, 12,519 bgs. W. Montgomery & Co.

Sodium Phosphates—
Belgium, 25 pks. T. Ronaldson & Co.

Sodium Sulphide—
Germany, £22 Union Ltge. Co., Ld.

Sodium Sulphite—
Germany, £23 H. Wallace & Co.

Starch—
Holland, 70 pks. Hernu, Peron, & Co.
,, 20 G. S. N. Co.
,, 810 A. Starck
,, 42 J. Barber & Co.
,, 100 Phillipps & Graves
,, 330 Little & Johnston
Belgium, 133 T. H. Lee
,, 100 Becker & Wagner
,, 48 Taylor Brs.
,, 181 Kearley & Tonge
,, 240 T. Ronaldson & Co.
,, 65 Leach & Co.
Germany, 60 Argo S. S. Co.
U. States, 20 Beck & Pollitzer
France, 30 G. E. Banes

Stearine—
Belgium, 63 bgs. H. Hill & Sons
,, 54 D. C. Thomas & Sons
France, 150 H. Hill & Sons
Holland, 254 J. W. Cook & Co., Ld.

Sulphur—
Italy, 500 t. Fuerst Brs.
,, 23 Curtiss & Harvey
,, 160 Bailey & Leetham, Ld.

Sulphuric Acid—
Germany, 37 pks. H. Lambert

Tallow—
France, 132 bgs. H. Hill & Sons
Melbourne, 109 cks. Union Ltge. Co., Ld.
,, 63 Lucas & Spencer's Wf.
,, 186 Elkan & Co.
,, 46 Deering & Robottom
,, 72 Bessler, Waechter, & Co.
N. Zealand, 50 Phillipps & Graves
,, 7 Culverwell, Brooks, & Co.
,, 34 Deering & Robottom
,, 32 N. Z. L. & M. A. Co.
,, 25 N. M. & A. Co.
,, 112 Dalgety & Co., Ld.
,, 92 J. Owen
,, 51 H. Hill & Sons
,, 66 J. Graves
,, 360 Phillipps & Graves
,, 75 Perkins & Homer
Sydney, 62 J. R. Francis & Co.
,, 60 Flack, Chandler, & Co.
,, 273 J. W. Cook & Co., Ld.
,, 125 pks. A. B. Curtis & Co.
China, 20 cks. Beresford & Co.

Tartar—
Italy, 33 cks. Fellows, Morton, & Co., Ld.
,, 21 pks. Howards & Sons
,, 39 B. Jacob & Sons

Tartaric Acid—
Germany, 2 pks. D. Thom Domeier
Holland, 34 Kirkpatrick, Barr, & Co.
Belgium, 8 F. C. Devon & Co.

Ultramarine—
Holland, 6 pks. J. Barber & Co.
,, 5 G. S. N. Co.

Varnish—
U. States, 29 pks. Taylor Brs.

Verdigris—
France, 3 pks. Burnett Brs. & Sons

White Lead—
Belgium, 75 pks T. & W. Farmiloe, Ld.
,, 80 J. E. Kitton
Cape Town, 4 J. Owen
,, 81 Randall Brs.
Germany, 25 N. J. Fenner & Co.
Holland, 20 Kerestiji & Co.

Wood Pulp—
U. States, 4,010 pks. Henderson, Craig, & Co.
,, 82 W. G. Taylor & Co., Ld.
Norway, 250 ,,
,, 150 Johnsen & Jorgensen
,, 400 W. E. Bott & Co.
Sweden, 210 Becker & Co.
,, 180 Christophersen, Andrews, & Co.
,, 300 G. Hagborg & Co.
,, 104 Henderson, Craig, & Co.
,, 240 Alsing & Co., Ld.
Canada, 4,000 W. D. Cork
,, 2,257 M. Dk. Co.
Belgium, 2,023 J. Harrison
Germany, 567 Becker & Wagner

Zinc Oxide—
Holland, 40 pks. M. Ashby, Ld.
Cape Town, 50 J. Matton

LIVERPOOL.

Week ending April 20th.

Acids—
Boston, 1 cs. Amer. Express Co.

Arsenic—
Stettin 20 cks.

Barytes—
Hamburg, 20 bgs.

Bones—
Alexandria, 278 bgs.

Caoutchouc—
Valparaiso, 15 bls. J. H. Schroeder & Co.

Caustic Potash—
Bremen, 14 dms.

Chemicals *(otherwise undescribed)*
Hamburg, 1 cs.

Coal Products—
Alizarine
Rotterdam, 12 cks.

Colours—
Boston, 1 dm Everitt & Co.
Rotterdam 2 cks. 1 brl.

Cottonseed Oil—
Galveston, 405 brls. R R Davey

Cream of Tartar—
Bordeaux, 31 cks.
Tarragona, 7

Dried Blood—
Naples, 6 cs. H. D. Kardie & Co.

Dyestuffs—
Argols
Leghorn, 2 cks. Taylor, Irvine & Co.
Cutch
Singapore, 50 bxs.
Boston, 50
Dyewood
New York, 225 brls. M'Arthur
50 bxs. & Co.
Havre, qty.
Extract
Bordeaux, 250 cks. J. R Francis & Co.
Nantes, 302 ,,
Fiume, 300 brls. Oak Extract Co.
,, 140 D. Clermont & Donner
New York, 72
Philadelphia, 40
Baltimore, 10 E. Brownbill & Co.
Havre, 3 cks. Cunard S.S. Co.
Fustic
Cartagena, 860 pcs. Anciozar Brs. & Co.
Gambier
Singapore, 504 bgs. 1,704 bls
Logwood
Barcelona, 3 cks. B. Behrend & Co.
Shumac
Palermo, 1,100 bgs.
Barcelona, 100 sks.
Valonia
Zante, 148 bgs. A. M. Calaifas

Dyestuffs *(otherwise undes.)*—
Boston, 206 cs. Fawcett & Johnston

Dyewood Extract—
Colon, 56 cs. D. Midgley & Co.

Farina—
Havre, 100 sks Cunard S.S. Co.
Stettin, 20 bgs. P. Davies & Co.
Rotterdam, 50

Glucose –
Boston, 100 brls. T. M. Duche & Sons
,, 1,500

Glue—
Fiume, 50 bgs. T. M Duche & Sons
,, 100 Ihler & Sankey
Genoa, 5 cks.
Hamburg, 40 bdls.

Iodine—
Valparaiso, 75 kgs. A. Gibbs
72 brls. & Sons

Manganese Ore—
Yokohama, 400 t.

Mica (Pulp) –
New York, 3 brls. Walker, Curver & Co.
,, 7

Molasses—
Colon, 750 brls.

Paraffin Wax—
New York, 60 brls. Thompson
750 cs. & Bedford
Baltimore, 100 brls.

Phosphates—
Brunswick, 1,297 t.
Punta Gorda, 1,861
Ghent, 1,000 bgs.

Phosphorus—
Portland, M., 100 cs.

Potash—
Rotterdam, 42 cks.

Pyrites—
Huelva, 5,921 t. Mathieson & Co.

Red Lead—
Rotterdam, 33 cks.

Salt—
W. C. Africa, 55 bgs.

Saltpetre—
Hamburg, 4 cks.

Soap—
Philadelphia, 4,000 bxs.
Naples, 82 cs.
Rotterdam, 2 25
W. C. Africa, 1
Boston, 10 cs. addressed

Soap Stock—
New York, 1,529 brls.
Leghorn, 25
N. Orleans, 500

Sodium Nitrate—
Tal Tal, 956 bgs. Schnitz & Co.
Caleta Buena, 9,483 ,,

Starch—
Boston, 125 bgs. F.W.Simmonds
,, 100 T. M. Duche & Sons
Rotterdam, 40 cs. Brown, Geveke & Co
,, 18
New York, 100 bxs. J. Howard
125 brls. & Co.

Sulphur—
Valparaiso, 1 cs. Brissel & Co.
Catania, 133 cks. 50 brls. 320 bgs.

Tallow—
Boston, 65 tcs.
Colon, 50
New York, 250

Tartaric Acid—
Messina, 24 cks.
Hamburg, 3

Varnish—
New York, 20 brls.

Waste Salt—
Hamburg, 121 bgs.

Wood Pulp—
St. John's, 2 crts. G. Sampson
St. John, N.B., 4,036 bdls.
Portland, M., 677 bls.

Zinc White—
Rotterdam, 7 cks.
Stettin, 30

MANCHESTER.

Week ending April 22nd.

Antimony Bisulphite—
Hamburg, 4 cks.

Barytes—
Antwerp, 50 bgs.
Rotterdam, 2 cks.

Calcium Carbide—
Gothenburg, 16 dms.

Chemicals *(otherwise undescribed)*
Hamburg, 1 cs.
Rotterdam, 3 cks.

Coal Products—
Alizarine
Rotterdam, 25 cks.
Aniline Salt
Rotterdam, 19 cks.
Naphtha
Treport, 27 cks.

Colours—
Antwerp, 4 cks. J. T. Fletcher & Co.
,, 4
Ghent, 2
Hamburg, 54 7 cs.
Rotterdam, 171 20 16 bxs. 104 brls.

Dyestuffs—
Extracts
Rotterdam, 16 cks.
Tannin
Hamburg, 4 cks. 9 pks.
Rotterdam, 4

Dyewood Extract—
New York, 48 bxs.

Farina—
Hamburg, 200 bgs.
Rotterdam, 100

Glucose—
Rotterdam, 10 cks.

Glue—
Rotterdam, 2 cks. 8 cs. 95 bgs.
Treport, 9

Glycerine—
Hamburg, 10 cs.

Litharge—
Rotterdam, 6 cks.

Ochre—
Rouen, 24 cks.
Treport. 17

Oxalic Acid—
Rotterdam, 15 cks.

Oxalic Potash—
Rotterdam. 5 cks.

Paraffin Wax—
New York, 840 brls. 900 cs.

Potash—
Hamburg, 10 cks.

Potassium Bisulphate—
Hamburg, 5 cks.

Red Lead—
Rotterdam 6 cks.

Soap—
Hamburg, 1 cs.

Starch—
Antwerp, 285 cs.
Hamburg, 312
Rotterdam, 200

Stearine—
Antwerp, 10 bgs.
Rotterdam, 26 bls.

Sulphur—
Hamburg, 1 ck.

Sulphuric Acid—
Rotterdam, 20 cks.

Tartar Emetic—
Hamburg, 1 ck.

Tartaric Acid—
Hamburg, 11 cks.
Rotterdam, 32
Rouen, 20 cs.

Tungstate Soda—
Hamburg, 1 ck.

Ultramarine—
Rotterdam. 5 cks.

Waste Salt—
Hamburg, 500 cks.

White Lead—
Antwerp, 5 cks.

Wood Pulp—
Christiania, 4,580 bls. W. H. Ingram
Drammen. 800 ,,
Gothenburg, 1,595 ,,
Rotterdam, 72 rolls 23 pks.
72 bdls.
Skien, 1,075 bls. W. H. Ingram
,, 192 brls. ,,

Zinc Oxide—
New York, 100 brls.
Rotterdam. 10 cks.

Zinc White—
Rotterdam, 52 cks.

HULL.

Week ending April 22nd.

Antimony—
Hamburg, 5 cs. Wilson, Sons, & Co., Ld.

Barytes—
Amsterdam, 48 cks. Hull & Netherlands S. S. Co
Antwerp, 34 Bailey &
100 bgs. Leetham, Ld.
,, 35 cks H. F. Pudsey
Bremen, 76 G. Holmes & Co.
,, 65
Rotterdam, 23 Hull & Netherlands S. S. Co.
,, 100 bgs. Wilson, Sons, & Co., Ld.

Chemicals *(otherwise undescribed)*
Amsterdam, 1 cs. Hull & Netherlands S. S. Co.
Antwerp, 42 cks. Wilson,
1 brl. Sons, & Co., Ld.
,, 38 bgs.
Boston, 35 brls. ,,
Dunkirk, 53 pks. ,,
Ghent, 50 bgs. ,,
Hamburg, 370
,, 55 pks. ,,
Rouen, 10 cks. ,,

Coal Products –
Alizarine
Rotterdam, 51 pks. Hull & Netherlands S. S. Co.
52 brls.
Aniline
Rotterdam, 144 pks. Hull & Netherlands S. S. Co
Naphthol
Rotterdam, 1 cs. Hull & Nether lands S. S. Co.

Colours—
Amsterdam, 3 cks. Hull & Netherlands S. S. Co.
Antwerp, 1 Storry, Smithson, & Co.
,, 22 pks. Wilson, Sons, & Co., Ld.
Bremen, 2 cks. Veltmann & Co.
,, 1 cs. J. Pyefinch & Co.
New York, 110 brls.
Rotterdam, 15 cks. Hull & Netherlands S. S. Co.
23 cs.
Stettin, 15 cks.

Cottonseed Oil—
New York, 460 brls. Wilson, Sons, & Co , Ld.

Dextrine—
Stettin, 55 bgs. Wilson, Sons, & Co., Ld.

Dyestuffs—
Extracts
Rotterdam, 1 ck. Wilson, Sons, & Co., Ld.
Indigo
Rotterdam, 10 brls. Hull & Netherlands S. S. Co.
8 chts.
Valonia
Hamburg, 725 bgs.

Farina—
Rosario, 100 bgs
Stettin, 320

Glucose—
New York, 50 brls. Wilson, Sons, & Co., Ld.
,, 350
Stettin, 50 kgs.

Glue—
Amsterdam, 5 bgs. Hull & Netherlands S S Co.
Dunkirk, 17 Wilson, Sons, & Co., Ld.
Hamburg, 9 cks. Bailey & Leetham, Ld.
Rouen, 10 bls. Wilson, Sons, & Co., Ld.

Lead Acetate—
Amsterdam, 3 cks. Hull & Netherlands S S. Co.

Linseed Oil—
Amsterdam, 1,160 brls. Hull & Netherlands S. S. Co.

Lithopone—
Amsterdam, 20 cks. Hull & Netherlands S. S. Co.
Bremen, 4

Magnesite—
Hamburg, 10 t. Wilson, Sons, & Co., Ld.

Manure—
Rotterdam, 200 bgs. Hull & Netherlands S. S. Co.

Paraffin Wax—
New York, 400 pks. Wilson, Sons, & Co., Ld.

Phosphates—
Dunkirk, 150 t.
Ghent, 3 013 bgs. Wilson, Sons, & Co., Ld.
,, 200

Saltpetre—
Hamburg, 60 bgs. Wilson, Sons, & Co., Ld.
,, 2 cks.

Soap—
Boston, 200 tcs.

Starch—
Amsterdam, 120 cs. Hull & Netherlands S. S. Co.
20 bls.
Antwerp, 101 cs. Bailey & Leetham, Ld.
Bremen, 3,931 pks. Veltmann & Co.
Ghent, 284 cs. Wilson, Sons, & Co., Ld.
New York, 250 bgs.
Rotterdam, 40 cs. Hull & Netherlands S. S. Co.

Tallow—
Boston, 300 brls. Wilson, 30 tcs. Sons, & Co., Ld.
Dunkirk, 263 cks. ,,
New York, 100 tcs. ,,
Tartaric Acid—
Rotterdam, 2 cks. Hull & Netherlands S. S. Co.
Ultramarine—
Bremen, 2 cks. Veltmann & Co.
,, 18
Varnish—
Antwerp, 3 cs. Bailey & Leetham, Ld.
Hamburg, 4 cks. W. R. Todd & Son
Waste Salt—
Hamburg, 50 t. Bailey & Leetham, Ld.
,, 50 bgs. Lofthouse & Saltmer
White Lead—
Antwerp, 49 cks. Bailey & Leetham, Ld.
Rotterdam, 38 Hull & Netherlands S. S. Co.
Wood Pulp—
Christiania, 2,685 pks. Wilson, Sons, & Co., Ld.
Drontheim, 800 bls. ,,
Hango, 151
,, 91 J. Good & Sons
Rotterdam, 8 Hull & Netherlands S. S. Co.
Zinc Oxide—
Antwerp, 20 cks. Bailey & Leetham, Ld.
,, 50 brls. Wilson, Sons, & Co., Ld.

GLASGOW.

Week ending April 27th.

Antimony—
Rouen, 84 pks.
Barium Chloride—
Rotterdam, 4 cks. J. Rankine & Son
Barium Sulphate—
Antwerp, 45 cks. 672 bgs
Barytes—
Amsterdam, 25 cks.
Bleaching Powder—
Rotterdam, 45 cks. J. Rankine & Son
Caoutchouc—
Hamburg, 1 cs.
Castor Oil—
Antwerp, 55 cks.
Chemicals *(otherwise undescribed)*
Hamburg, 1 ck.
Chrome Ore—
Ghemlet, 3,260 t. J. & J. White
Citric Acid—
Messina, 4 cs.
Coal Products—
Alizarine
Rotterdam, 24 cks. 4 cs. J. Rankine & Son
Aniline
Rotterdam 28 cs. J. Rankine & Son
Amsterdam, 3 cks. 1 ,,
Aniline Dyes
Antwerp, 1 ck. 1 cs
Colours—
Rouen, 3 cks.
Rotterdam, 3 cks. 2 cs. J. Rankine 166 pks. & Son
Hamburg, 36 cks. 5 cs.
Dyestuffs—
Dyewood
New York, 25 brls.
Extracts
Rouen, 3 cks.
Fiume, 203 brls.
Baltimore, 25
Fustic
Montego Bay, 45 t.
Indigo
Rotterdam, 10 cks. J. Rankine & Son
Logwood
Montego Bay, 5 t. 5 c.
Shumac
Palermo, 650 bgs.
Dyewood Extract—
Antwerp, 5 cks.
Glucose—
New York, 500 brls.
Baltimore, 210
Glue—
Genoa, 29 cks.
Rouen, 43 20 bgs.
Fiume, 100
Hamburg, 4 20 50 kgs.
Antwerp, 4 Crawford & Co.
Rotterdam, 50 bgs. J. Rankine & Son
Lead Acetate—
Amsterdam, 28 cks. J. Rankine & Son
Hamburg, 23
Ochre—
Rouen, 209 cks.
Paint—
New York, 42 kgs.
Painters' Colours—
Antwerp, 10 cks.
Paraffin Wax—
Philadelphia, 300 brls.
Phosphates—
Antwerp, 2,000 bgs.
Potash—
Hamburg, 141 cks.
Rotterdam, 1 J. Rankine & Son
Red Lead—
Rotterdam, 16 cks. J. Rankine & Son
Rosin—
Baltimore, 600 brls.
Salt—
Hamburg, 500 bgs. 5 cs.
Saltpetre—
Hamburg, 20 cks.
Soap—
Genoa, 50 cs
Seville, 1
Rouen, 50
New York, 2,500 bxs.
Baltimore, 748 brls.
Rotterdam, 100 cs. J. Rankine & Son
Soda—
Genoa, 74 brls.
Rouen, 7 cks.
Soda Crystals—
Antwerp, 1 cs.
Sodium Nitrate—
Thirlmere, 2,500 t. A. Cross & Sons
Junin, 9,984 bgs. F. Aikman & Co.
Starch—
New York, 1,000 bxs.
Antwerp, 100 cs.
Baltimore, 200 bgs.
Fiume, 80
,, 250 J. Andersen & Co.
,, 30 H. D. Hardie & Co.
Stearine—
New York, 8 hhds. 15 brls.
Sulphuric Acid—
Rotterdam, 17 crbys. J. Rankine & Son
Varnish—
New York, 1 bx. 36 brls.
Antwerp, 4 cks.
Waste Salt—
Hamburg, 1,000 bgs. 203 t.
Antwerp, 200
White Lead—
Rotterdam, 199 cks. J. Rankine & Son
Wood Pulp—
Christiania, 831 bls.
Zinc Oxide—
New York, 55 brls.
Hamburg, 50 cks.
Antwerp, 57

TYNE.

Week ending April 22nd.

Coal Products—
Pitch
Hamburg, 80 brls. Tyne S. S. Co.
Colours—
Hamburg, 3 cks. Tyne
1 cs. S. S. Co.
Rotterdam, 1 ck. ,,
Glue—
Antwerp, 2 cks. Tyne S. S. Co.
Gutta Percha—
Hamburg, 1 bl. Tyne S. S. Co.
Paraffin Wax—
New York, 1,030 brls. C. Hassell & Son
Phosphates—
Pt. Royal, 2,578 t.
St. Valery, 340
Pyrites—
Huelva, 2,881 t. Tharsis Sulphur & Copper Co.
Starch—
Antwerp, 40 cs. Tyne S. S. Co.
Rotterdam, 100 ,,
Wood Pulp—
Christiania, 670 bls.
Rotterdam, 110 Tyne S. S. Co.

GOOLE.

Week ending April 19th.

Alkali—
Calais, 4 cks.
Antimony Sulphide—
Boulogne, 1 ck.
Coal Products—
Alizarine
Rotterdam, 32 cks.
Colours—
Amsterdam, 2 pks.
Boulogne, 88 cks.
Hamburg, 25 13 cs.
Dyestuffs *(otherwise undes.)—*
Antwerp, 1 ck.
Boulogne, 63
Rotterdam, 472 60 cs.
Dyestuffs—
Extracts
Hamburg, 40 cks.
Farina—
Delfszybl, 450 bgs.
Hamburg, 150
Glucose—
Calais, 200 bgs.
Glue—
Boulogne, 1 ck.
Potash—
Dunkirk, { 4 cks. / 10 bgs. 20 dms.
Pyrites—
Seville, 1,080 t.
Saltpetre—
Hamburg, 38 cks.
Rotterdam, 100 bgs.
Soda—
Antwerp, 8 bgs.
Ghent, 200
Tartaric Acid—
Rotterdam, 2 cks.
Ultramarine—
Rotterdam, 24 cks.
Waste Salt—
Hamburg, { 558 bgs. / 139 cks.

GRIMSBY.

Week ending April 22nd.

Acids—
Antwerp, 6 cs.
Barytes—
Hamburg, 20 cks.
Caoutchouc—
Antwerp, 1 cs.
Hamburg, 1
Rotterdam, 1
Chemicals *(otherwise undescribed)*
Hamburg, 1 cs. 2 pks.
Colours—
Antwerp, 23 cks. 1 cs. 66 pks.
Hamburg, 35 125
Rotterdam, 5
Dyestuffs *(otherwise undescribed)*
Dieppe, 20 cks.
Dyestuffs—
Indigo
Hamburg, 1 cs.
Soap—
Rotterdam, 100 bxs.

EXPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending April 26th.

Acids—
Durban, 10 cs. £19
Alkali—
New York, 7 t. 18 c. £128
Ammonia—
Paris, 3 t. 8 c. £80
Adelaide, 5 cs. 15
Cape Town, 10 15
Calcutta, 18 26
Ammonium Carbonate—
Montreal, 2 t 16 c. £70
Cologne, 1 15 45
St. Petersburg, 825 1 2,053
Rangoon, 1 cs. 22
New York, 25 cks. 180
Ammonium Muriate—
Melbourne, 2 t. £36
Ammonium Sulphate—
Dunkirk, 5 t. £55
Martinique, 16 166
Amsterdam, 150 1,500
Hamburg, 20 220
Newport News, 100 9 c. 1,050
Valencia, 450 3 4,951
Arsenic—
Adelaide, 1 t. 10 c. £43
Bisulphite of Lime—
Bombay, 2 t. 2 c. £31
Pt. Elizabeth, 1 2 8
Borax—
Adelaide, 1 t. £17
Carbon Bisulphide—
Hamburg 9 t. 10 c. £95
Caustic Soda—
Canterbury, 11 c. £28
Shanghai, 5 7
Chemicals *(otherwise undescribed)*
Brussels, 7 cks. £48
Montreal, 34 pks. 270
Trinidad, 2 cs. 20
Pt. Elizabeth, 3 28
Toronto, 14 22
Cape Town, 1 29
Manila, 10 23
Durban, 2 13
Philadelphia, 10 c. 68
Brisbane, 52 79
Mauritius, 4 20
New York, 250 cks. 706
Boulogne, 1 1 24
M. Video, 11 15
Thursday Is., 2 14
Adelaide, 15 56
Cadiz, 1 13
San Francisco, 21 39
Auckland, 4 brls. 28
Bombay, 2 20
Genoa, 10 kgs. 60
Calcutta, 21 9 98
Rio de Janeiro, 6 45
Sydney, 1 23
Madras, 30 39
Melbourne, 56 26 161
Chloride of Lime—
Pt. Elizabeth, 15 c. £11
Citric Acid—
Christchurch, 3 c. £44
Colombo, 1 8
Brisbane, 5 32
Alexandria, 1 kg. 4
Brussels. 10 64
Rangoon, 1 8
Amsterdam, 10 60
Durban, 2 13
Maryboro, 1 7
Hiogo, 2 13
Cape Town, 1 7
Calcutta, 4 2 cs. 48
Coal Products—
Aniline
Boulogne, 2 cks. £5
Wellington, 11
Calcutta, 2 kgs 19
Sydney,
Aniline Oil
Cologne, 136 ms. £325

Anthracene
Dusseldorf, 171 cks. £410
Cologne, 245 1,200
Benzol
Cologne, 50 cks. £178
Yokohama, 9 cs. 23
Stockholm, 2 dms. 25
Carbolic Acid
Boston, 176 cks. £1,287
Hong Kong, 65 dms. 26
Ludwigschafen, 48 250
E. London, 60 9
St. Petersburg, 10 cs. 66
Creosote
Newport News, 200 cks. £115
Creosote Salt
Antwerp, 572 bgs. £70
Naphtha
Brisbane, 10 cks. £9
Naphthaline
Aden, 4 cks. £17
New York, 140 117
Pitch
Pt. Elizabeth, 15 brls. £7
Montreal, 200 46
Antwerp, 2,838 t. 3,112
Amsterdam, 723 750
Madeira, 4 9
Salonica, 100 28
Boston, 200 cks. 100
Adelaide, 6 cs. 5
Sydney, 8 31
Pyridine Bases
Cologne, 24 cks. £242
Tar
Cape Town, 90 cks. £58
Brisbane, 50 dms. 10
Cape Town, 90 58
Delagoa Bay, 40 6
Durban, 40 frkns. 250 11
Adelaide, 25 6
Hamburg, 245 brls. 112

Coal Products (*otherwise undes.*)—
Sydney, 200 dms. £49

Copper Sulphate—
Oporto, 5 t. 13 c. £120
Rouen, 10 5 230
Treport, 5 112

Cream of Tartar—
Wellington, 5 c. £20

Disinfectants—
Paris, 50 cks. £42
Cape Town, 21 cs. 30 pks. 85
Calcutta, 351 dms. 23
Bombay, 20 18
Rangoon, 10 1 70
Sydney, 25 104
Madras, 80 19
Mauritius, 4 13
Durban, { 6 50 64
50 pks.

Glycerine—
Yokohama, 3 t. 10 c. £152
New York, 41 9 1,145

Manure—
Martinique, 15 t. £60
Bordeaux, 10 45
Landerneau, 220 2 c. 935
Demerara, 40 363
Trinidad, 16 16 86
Adelaide, 10 30

Mercuric Chloride—
Bombay, 1 t. 12 c. £367

Nitric Acid—
Madras, 40 cs. £32

Oxalic Acid—
Brisbane, 19 c. £28
Melbourne, 1 t. 30
Sydney, 1 28

Phosphoric Acid—
Townsville, 5 t. 3 c. £82

Potash—
Antwerp, 4 t. 13 c. £253

Potash Crystals—
Adelaide, 1c c. £10

Potassium Bicarbonate—
Philadelphia, 2 t. 6 c. £61

Potassium Cyanide—
Fremantle, 1 t. £112
Sydney 1 4 c. 138
E. London, 5 513
Townsville, 18 50 cs. 2,712
La Paz, 100 560
Normanton, 1 120
Melbourne, 9 849
Delagoa Bay, 37 3,562
Vera Cruz, 4 411
Durban, 50 548

Potassium Prussiate—
Montreal, 2 t. 2 c. £150
Yokohama, 1 67
St. Petersburg, 3 cks. 56

Salammoniac—
Shanghai, 12 kgs. £13

Saltpetre—
Rio de Janeiro, 1 t. 4 c. £27
Oporto, 7 10 145

Sheep Dip—
B. Ayres, 13 t. 13 c. £300
Cape Town, 7 13 100 dms. 237
Singapore, 10 cs. 21

Soda—
Montreal, 1 t. 3 c. £10

Soda Crystals—
Cape Town, 2 t. 13 c. £14

Sodium Biarseniate—
Bremen, 1 t. 2 c. £35

Sodium Bicarbonate—
Patea, 2 t. £15
Sydney, 6 c. 6
Teneriffe, 12 5

Sodium Hyposulphite—
Auckland, 1 t. £20

Sodium Nitrate—
Paris, 9 t. 15 c. £85
Trinidad, 3 14 32

Sodium Sulphate—
Ghent, 100 t. £150

Sodium Tartrate—
Montreal, 17 c. £49
Hamilton, 11 31

Sulphur—
Lisbon, 250 brls. £174

Sulphuric Acid—
Durban, 15 c. £18
Madras, 50 cs. 19
E. London, 20 dms. 22
Colombo, 25 40

Superphosphates—
Trinidad, 290 t. £657
Riga, 247 580

Tartaric Acid—
Auckland. 5 c. £31
Christchurch, 2 12
Melbourne, 1 t. 10 163
Yokohama, 1 111

LIVERPOOL.

Week ending April 26th.

Acetic Acid—
Rio de Janeiro, 5 t. £52

Aluminous Cake—
Bombay, 2 t. 2 c. 2 q £8
Calcutta, 25 4 85

Ammonia—
Pt. Said, 2 c. £20
Callao, 4 8

Ammonium Carbonate—
Valparaiso, 5 t £130
Corunna, 10 c. 1 q. 14
Rangoon, 17 20
Seville, 1 2 27
Marseilles, 1 18 1 53
Barcelona, 2 49
Gothenburg, 1 12
Mexico City, 5 3 11
Oporto, 10 cks. 24

Ammonium Muriate—
Danzig, 13 c. £13
Montreal, 2 t. 18 91
Philadelphia, 16 11 323
Genoa, 1 19

Ammonium Sulphate—
Barcelona, 26 t. 9 c. £265
Palermo, 20 18 255
Cullera, 266 6 2 q. 2,787
Teneriffe, 23 2 255
Las Palmas, 12 8 138
Gd Canary, 15 175
Madeira, 3 33
Malaga, 50 500
Alicante, 34 1 3 355
Valencia, 151 1 1,695

Basic Slag—
Granville, 610 t. £425

Bichrome—
Lisbon, 7 c. £8

Bleaching Powder—
Bombay, 14 cs.
Boston, 531 cks
Calcutta, 40
Cambrai, 19
Everitt, 77
Lisbon, 59
Maranham, 6
Montreal, 22
Muncie, 68
Naples, 70
Nantes, 74
New York, 171 56 brls. 20 dms.
Rio de Janeiro, 28
Rouen, 25
Tyrone, 59

Borax—
Montreal, 18 t. 18 c. £299
Toronto, 29 4 458
Havana, 14 3 q. 12
Vera Cruz, 2 29
Habana, 2 8 39
Natal, 2 39
E. London, 2 4 3 87
Townsville, 11 176
Antwerp, 2 19 49
Bombay, 1 10 28
Trieste, 1 12 2 26
Lisbon, 10 brls. 20
Fiume, 1 4

Calcium Carbide—
Hong Kong, 2 t. 12 c. £74
Natal, 15 c. 1 q. 14

Calcium Chloride—
Montreal, 2 t. 1 c. £5
Rouen, 20 4 56
Odessa, 50 7 105
Leghorn, 4 19 11
Boston, 10 24

Caustic Potash—
San Francisco, 1 t. 5 c. £48
New York, 19 2 474
Barcelona, 1 8 42

Caustic Soda—
Adelaide, 10 cs.
Alicante, 50 dms. 25 brls.
Amsterdam, 20
Barcelona, 100 190 cks.
Bourgas, 15
B. Ayres, 207
Calcutta, 28
Cartagena, 125 pks.
Coquimbo, 40
Corunna, 11 brls.
Fiume, 71
Galatz, 118
Genoa, 174
Hamburg, 14
Havre, 25
Hiogo, 296
Ibrail 110
Jaffa, 50
Karachi, 7
Kingston, 10
Kobe 204
Leghorn, 5
La Guayra, 20
Malaga, 30
Mazatlan, 300
M. Video, 25
Montreal, 25 81 pks.
New York, 100 brls.
Oporto, 14 44
Pernambuco, 33
Progresso, 115
Pt. Alegre 50
Puerto Cabello, 21
Rangoon, 27
Rio de Janeiro, 64
Rotterdam, 18 23
Salaverry, 50
Seville, 50
Stettin, 45
Stockholm, 15
Talcahuano, 75
Tampico, 150
Tarragona, 30
Trieste, 34
Trinidad, 18
Valparaiso, 56

Chemicals (*otherwise undescribed*)
Maranham, 1 c. 2 q. £10
Canea, 2 t. 3 10
Montreal, 10 10 52
Alexandria, 3 15
Fiume, 1 5
Varna, 6 13
Dunedin, 3 3
Sydney, 20 kgs. 16
Havana, 9 7
Marseilles, 1 1 2 17
Antwerp, 1 3 1 18
Palermo, 10 8
Rio de Janeiro, 4 1 400
Philadelphia, 12 3 309
Valencia, 1 18 2 30
Barcelona, 14 11 3 260
Rosario, 3 kgs. 7
B. Ayres, 15 1 2 —
Calcutta, 132
Madras, 1 1 5
Smyrna, 7 7 3 40

China Clay—
Baltimore, 72 t. 10 c.
Boston, 742
Bombay, 78 17
Genoa, 200 bgs.
N'port News, 1,383 cks.
New York, 550
Pernambuco, 50
Philadelphia, 600
Portland, 457

Chromic Acid—
New York, 2 t. £120

Citric Acid—
Corunna, 4 c. £28

Coal Products—
Alizarine
New York, 30 cks.
Rio de Janeiro, 10
Aniline Colour
Boston, 13 c.
Genoa, 8 kgs.
Montreal, 2 cks.
New York, 26 16 pks.
Aniline Oil
Genoa, 5 dms.
Aniline Salt
Boston, 21 t. 4 c.
Genoa, 10 cks.
Carbolic Acid
Rouen, 27 t. 6 c. 2q. £1,075
Vera Cruz, 19 2 13
Hamburg. 2 11
Rotterdam, 10 624
Amsterdam, 4 19 302
Bombay, 3 1 5
Odesas, 3 1 12
Adelaide, 5 13
Yokohama, 7 10 435
Pernambuco, 1 3 7
New York, 9 13 391
Barcelona, 14 3 47
Calcutta, 2 14 21
Creosote
Lisbon, 100 brls
Creosote Salt
Antwerp, qty. £20
Naphtha
Melbourne, 50 dms.
St. John's, 20
Pitch
Bilbao, 20 t. 6 c.
Carril, 50 brls.
Cette, 734
Galatz, 25
St. John's, 10
Tar
Algoa Bay, 5 dms.
Bombay, 1 ck.
Conakry, 40 kgs.
St. John's, Nfd. 30 brls.

Cobalt Oxide—
New York, 9 c. £349

Copperas—
B. Ayres, 19 t. 9 c. £34

Copper Oxide—
Piræus, 5 t. 9 c. £324

Copper Sulphate—
Nantes, 4 t. 18 c. £113
Bordeaux, 308 3 2q. 8,798
La Pallice, 3 18 91
Naples, 19 1 2 394
Leghorn, 49 17 3 1,088
Para, 10 4 1 270
Cette, 196 11 1 4,925
Venice, 118 1 2,897
Genoa, 41 2 2 1,051
Oporto, 24 10 3 430
Missolonghi, 3 2 48
Volo, 5 5
Corunna, 1 25
Vigo, 71 7 3 1,767
Piræus, 6 15 150
Sydney, 1 21
Lisbon. 75 1 1 1,788
Nauplia, 19 3 21
Batoum, 200 3 3,039
Marseilles, 19 15 1 483
Calcutta, 2 10 55
Bombay, 1 27
Bari, 12 6 287
Algiers, 10 3 240
Habana, 1 10 31
Tarragona, 19 12 3 478
Brindisi, 9 19 3 176

Cream of Tartar—
Tampico. 4 c. £17

Disinfectants—
Bombay, 1 t. 13 c. £15
Kurrachee, 11 1 q. 18
Calcutta, 2 5 38
Rangoon, 10 cs. 48
Fremantle, 45 dms. 40

Hydrosulphite of Lime—
Dunedin, 3 c. £3

Hydrosulphite of Magnesia—
Dunedin, 3 c. £8

Lead Acetate—
Habana, 1 t. 1 c. 2 q. £29
Magnesia—
Adelaide, 6 cs.
Corunna, 1
Dunedin, 14 kgs.
Genoa, 2
Paris, 73
Savanilla, 1
Seville, 15 bls.
Toronto, 4
Magnesium Chloride—
Rangoon, 1 t. 10 c. £7
Manure—
B. Ayres, 12 c. 3 q. £20
Manila, 18 t. 2 2 118
Gd. Canary, 10 210
Oxalic Acid—
Boston, 9 t. 15 c. £220
Paint—
Amsterdam, 40 pks.
Beyrout, 20 brls.
Arecibo, 4 cks.
B. Ayres, 291 kgs.
Cabenda, 20
Cadiz, 30 dms.
Cartagena, 3
Charlotte Town, 16
Constantinople, 88 132 tins
Curacoo, 50
Ferrol, 14
Gd. Bassam, 5
Guayaquil, 100
Gibraltar, 302
Iloilo, 4 cks.
Havana, 130
Ibrail, 4
Limon, 10 cs.
Lisbon, 48
Lota, 8
Maceio, 16
Malta, 3
Manaos, 8
Manila, 100
Matanzas, 4
Mazatlan, 300 175
M. Video, 15
Nassau, 6
Para, 10
Ponce, 1
Pt Natal, 40
Portland, 39
Rio Grande, 2
Rosario, 3
Sagua, 9
St. John's, Nfd, { 9 pks. 35 dms.
St. John's, 15
Saltpona, 20
Samara, 13 cks.
San Juan, 2
Santander, 2
Sierra Leone, 2
Singapore, 1
Talcahuano, 10 21 brls.
Tampico, 64
Trieste, 50 dms.
Tuticorin, 6
Valparaiso, 180
Vera Cruz, 230
Yokohama 130
Painters Colours—
Algoa Bay, 3 cks
Barcelona, 13 pks.
Bombay, 1,184
Calcutta, 3 cks.
Callao, 85 cs.
Ceara, 4 pks.
Constantinople, 292 kgs.
Degama, 29
Galatz, 300 brls. 100 cks.
Karachi, 100
Lima, 1
Mazatlan, 4 54
Mollendo, 2
M. Video, 24
Montreal, 31
New York, 5 10
Panama, 9
Patras, 2
Pelotas, 21
Rio de Janeiro, 6
St. John's, Nfd, 194 pks.
Santander, 74 cks.
Seville, 9 brls.
Sierra Leone, 48 8
Toronto, 1 3
Townsville, 960
Trinidad, 3
Tripoli, 87 pks.
Valparaiso, 8 cs.
Paraffin Wax—
New York, 3 cs.
Phosphates—
Cape Town 89 t. 5 c. £145
Phosphorus (Amorph.)—
Rio de Janeiro, 6 cs. £72
Phosphorus—
Tampico, 5 cs. £46
Potash—
Bombay, 4 c. £14
Potassium Bicarbonate—
Catalonia, 8 c. £17
Corunna, 8 14
Rosario, 8 2 q. 17
Potassium Carbonate—
Boston, 18 t. 4 c. £319
Potassium Chlorate—
Antwerp, 4 cks. £10
Bari, 1 t. 33
Copenhagen, 4 120
Gutujewsky, 35 1,070
Hamburg, 5 154
Hiogo, 15 458
Mollendo, 10 cks. 17
New York, 5 t. 156
Oporto, 10 kgs. 16
Rio de Janeiro, 4 t. 18 c. 150
St. Petersburg, 1 10 45
Vera Cruz, 1 5 38
Potassium Cyanide—
Seville, 1 c. £5
Potassium Silicate—
Amsterdam, 1 t. 7 c. 2 q. £10
Salammoniac—
Accra, 3 c.
Axim, 3 2 q.
Copenhagen, 7 £10
Galatz, 1 t. 5 40
Hamburg, 5 8
Ibrail, 4 6
Philadelphia, 5 6 3 176
Tampico, 6 10
Trieste, 2 1 2 68
Sal Soda—
Montreal, 112 brls.
Salt—
Akassa, 498 t. 10 c.
Antwerp, 200
Baltimore, 285
Barbadoes, 50
Benin, 51
Boston, 450
Brisbane, 75
B. Ayres, 29 1
Calcutta, 1,003
C. C. Castle, 28 11
Cape Town, 10
Cardenas 35
Conakry, 55 16
Degama, 26
Dunedin, 125 2
E. London, 26 15
Ghent, 240
Gd. Bassa, 6 9
Gd. Bassam, 35
Guatanamo, 20
Halifax, 220
Havana, 60
Iloilo 20 cs.
Iquitos, 26 3 c.
Lagos, 75
Lahou, 24 cs.
Lucea, 16 c.
Melbourne, 113 9
Montreal, 141
Mossel Bay, 25 9
Napier, 20
N. Orleans, 225
New York, 560
Norrkoping, 30
Old Calabar, 5
Para, 3,200 sks.
Paspebiac, 500
Rangoon, 1,012
Rosario, 200 brls.
Rotterdam, 120
Sapeli 300 bgs.
Santos, 100 cs.
Sierra Leone, 100 t.
Stockholm, 8,790
Sydney, 321
Terneuzen, 200
Trinidad, 40 15 c.
" 1,005
Vera Cruz, 200 bgs.
Wellington, 54 t. 5
Winnebah, 200
Salt Cake—
Antwerp, 120 t. £155
Baltimore, 40 11 c. 66
Barranquilla, 15 3
Bombay, 3 18 11
Terneuzen, 200 250
Saltpetre—
Iquitos, 5 c. £6
Para, 2 t. 19 65
Pernambuco, 5 6 116
Sheep Dip—
B. Ayres, 9 t. 2 q. £252
E. London, 100 dms. 100
M. Video, 10 t. 6 c. 294
Punta Arenas, 63 cks. 252
R. Gallegos, 62 248
Soap—
Adelaide, 640 cs.
Akassa, 72 dms.
Alexandria, 34 bxs.
Algoa Bay, 1,800 62
Antwerp, 640
Auckland, 550
Baltimore, 20
Barbadoes, 730
Bluefields, 190
Bombay, 974 61
Brussels, 2,120
Calcutta, 9 750 bdls.
Canaria, 208
C. C. Castle, 210
Cape Town, 1,600 155
Christiania, 400
Conakry, 250
Delagoa Bay, 800 125
Dunedin, 750
Durban, 150
E. London, 1,050 50 13
Gibraltar, 525
Gorontalo, 50
Grenada 50
Hamburg, 51
Havana, 300
Iquitos, 450
Karachi, 41
Kingston, 1,000 5
Lagos, 1,272
Las Palmas, 445
Macassar, 573
Madras, 20 19
Malta, 40 40 1 crte.
Manaos, 1,320
Matadi, 1
Mauritius, 1,000
Montreal, 4
New York, 4
Palma, 1,300
Pt. Elizabeth, 500
Pretoria, 20
Rangoon, 650 115
Reunion, 500
Rotterdam, 100 102
St. Kitts, 200
St Lucia 201
St Thomas, W.I., 150
Salaora, 5 bdls.
San Juan, 200
Shanghai, 5,362
Sierra Leone, 425 pks.
Singapore, 100
Swakopmund, 25
Tientsin, 21 9
Toronto, { 38 kgs. 1,046 2 cks.
Trinidad, 1,504 bxs.
Valparaiso, 25 kgs.
Vera Cruz, 1
Wellington, 800
Winnipeg, 270 bxs.
Soap Lyes—
New York, 10 t. 5 c. £256
Soda—
Lisbon, 2 cks.
Soda Ash—
Baltimore, 800 bgs.
Barcelona, 16 cks.
Boston, 26 tcs.
B. Ayres, { 165 290 brls.
Calcutta, 50
Genoa, 595
Georgetown, 320
Ghent, 267
Gothenburg, 100 kgs. 24
Hiogo, 662
Johannesburg, 50
Libau, 450 bgs.
Lisbon, 24
Madras, 10
Maranham, 8
Montreal, 340 92 tcs.
Newport News, 800
New York, 710 15 brls.
Oporto, 4
Para, 10 kgs.
Preston, Ont., 107 bgs.
Puerto Cabello, 16
Rio de Janeiro, 4
Rosario, 240 10
Rotterdam, 764
Seville, { 100 kgs. 50 bgs.
Shanghai, 39
Smyrna, 300
Sydney, 532
Trieste, 100
Soda Crystals—
B. Ayres, 300 kgs.
Calcutta, 55 83 cks.
Gibraltar, 30 brls.
Montreal, { 1,300 bgs. 734
Peterboro, 20
Sodium Arseniate—
Vera Cruz, 7 cks.
Sodium Biarseniate—
Rio de Janeiro, 8 cks.
Sodium Bicarbonate—
Alexandria, 106 pks.
Alicante, 25 kgs.
Ancona, 50 4 cks.
Barcelona, 180 1
Bari, 25
Candia, 50
Canea, 90
Charkow, 100
Colombo, 31
Copenhagen, 20
Dedeagatch, 20
Ghent, 50
Gutujewsky, 4,300
Hamilton, 20
Hernani, 20 brls.
Hiogo, 800
Hong Kong, 24
Johannesburg, 24
Karachi, 100
Kingston, 20
Libau, 80
London, 195 25 bgs.
Madras, 40
Malaga, { 25 brls. 6 pks. 50 dms.
Marseilles, 120 62
Mazatlan, 60
Mexico City, { 100 bgs. 4 cks. 200 dms.
Montreal, 475 100 300
Rotterdam, 40
Rouen, { 105 30 cks.
Salonica, 8
Seville, 215 13
Valencia, 45 6
Vera Cruz, 50
Sodium Bichromate—
Rotterdam, 20 cks.
Sodium Carbonate—
Amsterdam, 25 brls.
Boston, 50
Sodium Chlorate—
Boston, 100 kgs.
Hamburg, 50 4 brls.
Philadelphia, 100
Rotterdam, 20
Sodium Hyposulphite—
Montreal, 61 cks.
Sodium Sulphate
Montreal, { 20 cks. 25 brls.
Sodium Stannate—
Montreal, 4 cks.
Spent Oxide—
Marseilles, 31 t. 15 c. £90
Sulphur—
Adelaide, 10 t. £43
Boston, 120 6 c. 699
Demerara, 1 10 8
Montreal, 65 7 395
Para, 9 3 q. 4
Portland, Me., 100 4 416
Quebec, 2 5 11
Sydney, 25 4 107
Sulphuric Acid—
Manaos, 11 c. £7
Pernambuco, 6 7
Superphosphates—
Alicante, 85 t. 9 c. 1 q. £230
Cullera, 361 1 838
Gandia, 70 3 2 193
Las Palmas, 1 4
Nantes, 132 9 2 258
Stettin, 1,100 6 2,586
Valencia, 429 4 2 1,116
Varnish—
Alexandria, 2 cs.
Bilbao, 1 ck.
Boston, 27 dms.
B. Ayres, 11
Genoa, 9 8
Landana, 10 brls.
Lisbon, 1 2
Malta, 1
Naples, 1 cs.
Paris, 2
St. John's, 2
Seville, 9
Talcahuano, 1
Toronto, 4
Valparaiso, 16

White Lead
St. John's, 40 kgs.
St Croix, 4
Zinc Chloride—
Bombay, 2 t. 18 c. 2 q. £48
Maranham, 6 5

MANCHESTER.

Week ending April 26th.

Beta-Naphthol—
Belgium, 3 brls.
Chemicals (*otherwise undescribed*)
Berlin, 1 ck.
Dresden, 25
Coal Products—
Aniline Colour
Belgium, 1 cs.
Aniline Salt
Belgium. 1 ck.
Anthracene
Germany. 134 cks.
Carbolic Acid
France, 76 btls.
Germany, 25 cks.
Naptnol
Germany, 12 cks.
Pitch
Belgium, 104 t. 18 c.
Cadiz, 2,008 11
Cette, 1,035
Toluol
Germany, 35 dms.
Dyestuffs (*otherwise undescribed*)
France, 3 pks.
Dyestuffs—
Extracts
France, 4 cks.
Glue—
Holland, 13 cks.
Salt—
France, 10 bgs.
Sodium Arseniate—
Bombay, 2 cks
Sodium Hyposulphite—
Bombay, 3 cks.
Sodium Naphthionate—
Switzerland, 26 cks.
Tallow—
Bombay, 70 brls.
Holland, 5 cks.
Turpentine—
Bombay, 32 dms.
Varnish—
Bombay, 30 dms.

HULL.

Week ending April 22nd.

Ammonium Sulphate—
Dunkirk, 196 bgs.
Bleaching Powder—
Danzig, 37 cks.
New York, 45
Caustic Soda—
Antwerp, 20 dms.
Danzig, 50
Chemicals (*otherwise undescribed*)
Alexandria, 12 pks.
Amsterdam, 24 cks.
Antwerp, 1 36 cs.
Christiania, 5 967 slbs.
Drontheim, 909 pks.
Gothenburg, 2 7 11
Hamburg, 12 35
Rotterdam, 10 85
Reval, 1 3
Riga, 150 bgs. 250
Stettin, 89 cks. 67
Coal Products—
Pitch
Antwerp, 277 t.
Dunkirk, 208
Tar
Aalesund, 2 cks.
Amsterdam, 6
Christiania, 10
Copenhagen, 13
Danzig, 5
Hamburg, 12
Rotterdam, 20
Cottonseed Oil—
Amsterdam, 30 t.
Antwerp, 14 4 c.
Dunkirk, 10 1
Ghent, 9 16
Gothenburg, 4
Hamburg, 26 5
Rotterdam, 94 15
Dyestuffs (*otherwise undescribed*)
Drontheim, 1 cs.
Riga, 3 cks.
Guano—
Dunkirk, 25 t.
Linseed Oil—
Amsterdam, 2 t. 3 c.
Antwerp, 2 2
Gothenburg, 17
Hamburg, 3 15
New York, 18 13
Rouen, 2 10
Manure—
Dunkirk, 55 t.
Paint—
Hango, 2 cks.
Painters' Colours—
Aalesund, 28 dms.
Alexandria, 10 cs.
Amsterdam, 16
Antwerp, 3 cks. 2 20 pks.
Bergen, 28
Bremen, 3
Christiania, 38 2
Copenhagen, 3 8 2
Danzig, 52 1 55
Dunkirk, 8
Ghent, 2
Gothenburg, 1 2 dms.
Hamburg, 34 2
Harlingen, 1 1
Konigsberg, 66
New York, 211
Riga, 3
Rotterdam, 22
Stavanger, 2 50
Stettin, 1
Salt—
Calcutta, 380 t.
Soap—
Christiania, 2 cs.
Hamburg, 1
Stearine—
Antwerp, 50 cks.
Superphosphates—
Antwerp, 18 t.
Tallow—
Rotterdam, 13 cks.
Stockholm, 5
Varnish—
Amsterdam, 4 cs.
Antwerp, 2 cks. 1
Christiania, 1
Reval, 1 dm.
Stavanger, 1
Stettin, 10
Stockholm, 8 1

GLASGOW.

Week ending April 27th.

Ammonium Carbonate—
Norrkoping, £18
Stockholm, 95
Ammonium Sulphate—
Amsterdam, 202 t. 12 c.
Gandia, 635 3 1 q.
Bleaching Powder—
Valparaiso, 17 c.
Borax—
Delagoa Bay, 3 t. 10 c. 2 q.
Coal Products—
Benzol
Hamburg, 4 c.
Carbolic Acid
Rotterdam. 25 cks.
Creosote Oil
Bordeaux, £2,509
Christiania, 17 10s.
Fremantle, 35
Russia, 315
Pitch
Amsterdam, 293 t. 2 c.
Caen, £949 10s.
Hamburg, 891 9
Montreal, 190
St. Nazaire, 1,197 10
Tar
Christiania, £7 15s.
Quebec, 190
Riga, 549
Colours—
Canada, £53
Copperas—
Bombay, 12 c. 1 q.
Dyestuffs (*otherwise undescribed*)
Rio de Janeiro, £395
Dyestuffs—
Dyewood
Rio de Janeiro, £20
Glue—
Stockholm, £36
Lead Nitrate—
Canada, £310
Rotterdam, 95
Linseed Oil—
Canada, 13 t. 8 c.
Tientsin, 4 19
Litharge—
Johannesburg, £95
Stockholm, 55
Magnesium Sulphate—
Paris, £33 14s.
Paint—
Hong Kong, £35
Yokohama, 23
Painters' Colours—
Arica, £39 5s.
Cape Town, 118
Havana, 174 15
Hong Kong, 53
New York, 258
Rotterdam, 5 19
Shanghai, 345
Valparaiso, 25
Paraffin Wax—
Cape Town, £163
Riga, 90
Stockholm, 292
Potassium Bicarbonate—
Amsterdam, £269
Bombay, 32
Canada, 136
New York, 516
Rouen, 33
Potassium Prussiate—
Canada, £47
Red Lead—
Singapore, £36 16s.
Stockholm, 85
Rosin—
Christiania, £3
Salts of Potash—
Mexico City, £484
Sheep Dip—
B. Ayres, £80
Soap—
Durban, 18 t. 15 c.
E. London, 15
Soda Crystals—
Durban, 6 t. 5 c.
Sodium Bicarbonate—
Canada, 1 t. 16 c. 2 q.
Cincinatti, 12 11 3
Quebec, 4 13 2
Rouen, 3 15 3
Sodium Iodide—
Rotterdam, £5:0
Starch—
Rio de Janeiro, £130
Tallow—
Riga, 10 t. 8 c.
Varnish—
Christiania, £9 10s.
Shanghai, 50
White Lead—
Johannesburg, £24
Shanghai, 100
Tientsin, 169

TYNE.

Week ending April 22nd.

Alkali—
Gothenburg. 5 t. 7 c. 2 q.
Antimony—
Bergen, 6 c.
Ergasteria, 2
Hamburg, 5 t.
Rotterdam, 3
Barium Binoxide—
Rotterdam, 7 t. 15 c. 3 q.
Rouen. 33 9 1
Barium Carbonate—
Copenhagen, 2 t.
Hamburg, 27 16 c. 2 q.
Barytes—
Hamburg, 1 bx.
Bleaching Powder—
Bergen, 10 t. 6 c. 3 q.
Christiania, 10 1
Copenhagen, 30 19 2
Gothenburg, 26 2
Hamburg, 12 13
Rotterdam, 8 17 1
Borax—
Ergasteria, 1 t. 6 c. 2 q.
Caustic Soda—
Antwerp. 13 t. 19 c. 3 q.
Christiania, 2 18
Genoa, 10 10
Linseed Oil—
Ergasteria, 13 c.
Litharge—
Gothenburg, 1 t. 6 c. 3 q.
Paint—
Bergen, 10 c.
Copenhagen, 2 t. 10 2 q.
Ergasteria, 7 3
Hamburg, 7
Rotterdam. 2
Painters' Colours—
Antwerp, 2 cks.
Red Lead—
Bergen, 3 t. 4 c.
Christiania, 9 19 1
Gothenburg, 1 7 2
Hamburg, 2 15 3
Odense, 20 2 3
Soda—
Christiania, 7 t. 7 c. 1 q.
Rotterdam, 38 11
Soda Ash—
Gothenburg, 50 t. 5 c. 1 q.
Hamburg, 6 14 2
Sodium Hyposulphite—
Christiania, 19 c. 3 q
Sodium Silicate—
Christiania, 3 t. 8 c. 3 q.
Sodium Sulphate—
Antwerp, 100 t.
Gothenburg, 235 5 c.
Sulphur—
Bergen, 75 t.
Gothenburg, 75
Superphosphates—
Helsingborg, 800 t. 1 c. 1 q.
Yarnish—
Kiel, 6 t. 1 c. 1 q.
White Lead—
Copenhagen, 2 t. 14 c. 2 q.
Rouen, 5 2
Zinc Ore—
Antwerp, 64 t. 4 c.

GOOLE.

Week ending April 19th.

Chemicals (*otherwise undescribed*)
Ghent, 1 cs.
Hamburg, 2 dms.
Coal Products (*otherwise undes.*)—
Amsterdam, 18 cks.
Boulogne, 9 2 cs.
Hamburg, 1
Rotterdam, 21 3
Coal Products—
Pitch
Antwerp, 841 t.
Dunkirk, 242
Dyestuffs (*otherwise undescribed*)
Ghent, 1 ck. 1 cs.
Hamburg, 58 bgs.
Limestone—
Stockholm, 380 blks.
Painters' Colours—
Antwerp, 1 ck.
Boulogne, 2 cs.

GRIMSBY.

Week ending April 22nd.

Alkali—
Dieppe, 3 cks.
Rotterdam, 5 cs.
Chemicals (*otherwise undescribed*)
Dieppe, 12 cs.
Coal Products (*otherwise undes.*)—
Dieppe, { 1 kg. / 124 cks. } 6 pks.
Hamburg, 15 btls. 5
Rotterdam, 10
Coal Products—
Pitch
Antwerp, 96 t. 10 c.
Painters' Colours—
Antwerp, { 3 kgs / 1 ck. } 1 cs. 1 pk.
Hamburg, 11

PRICES CURRENT.

WEDNESDAY, May 3, 1899.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9	&	8/3
,, Glacial .. .. ,,		35/-	
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	9
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	0	11½
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	0
Arsenic, white powdered .. .. nett per ton	18	15	0
Alum, loose lump .. .. ,,	4	5	0
Alumina Sulphate (pure) .. .. ,,	3	15	0
Aluminoferric .. .. ,,	2	3	6
Aluminium (Ingot metal 98/99¼ %) .. .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2¾
,, = 24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	19	0	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	11	7	6
,, ,, (grey) Hull .. .. ,,	11	5	0
Aniline Oil (pure) .. .. per lb.	0	0	4½
Aniline Salt ,, ... ,,	0	0	4
Antimony .. .. per ton	39	5	0
,, (tartar emetic) .. .. per lb.	0	0	7½
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	4	5	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6¼
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. ,,	15/-	to	25/-
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	7¼
,, 50/90 ,, ... ,,	0	0	7¾
Carbolic Acid (crude 60°) .. .. ,,	0	1	11½
,, (crystallised 40°) .. .. .. per lb.	0	0	6¾
,, (liquid 95/97%) .. .. .. per gallon	0	1	0
Creosote (ordinary) .. .. ,,	0	0	3½
,, (filtered for Lucigen light) .. .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	3	0	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	4	0
Solvent Naphtha, 90% at 160° .. .. per gallon	0	0	10
Copper .. .. per ton	76	8	9
,, Sulphate .. .. ,,	26	10	0
,, Oxide (copper scales) .. .. ,,	57	0	0
Glycerine (crude) 80% .. .. ,,	24	10	0
,, (distilled S.G. 1250°) .. .. ,,	48	10	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	2	6
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	15	7	6
,, Litharge Flake (ex ship) .. .. ,,	17	0	0
,, Acetate (white ,,) .. .. ,,	24	0	0
,, ,, (brown ,,) .. .. ,,	18	10	0
,, Carbonate (white lead) pure .. .. .. ,,	18	10	0
,, Nitrate .. .. ,,	22	10	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	4	17	6
,, ,, (grey) (ex ship) .. .. ,,	7	17	6
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton	9	10	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	14	15	0
,, Borate .. .. per cwt.	2	0	0
,, Ore, 70% .. .. per ton	3	10	0
Methylated Spirit, 61° O.P .. .. per gallon	0	2	0
Naphtha (Wood), Solvent .. .. ,,	0	3	0
,, ,, Miscible, 60° O.P. .. .. .. ,,	0	3	10
Oils:—			
Cotton-seed .. .. per ton	17	10	0
Linseed .. .. ,,	19	5	0
Stearine .. .. ,,	26	0	0
Phosphorus (Yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	10	0
,, Chlorate .. .. per lb.	0	0	3½
,, Cyanide, 98 % .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) 90 % .. .. per ton	22	0	0
,, ,, ,, 75/80 % .. ,,	17	15	0
,, Potash Hydrate Liquid 50 % .. .. ,,	11	0	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	2	12	6
,, Prussiate Yellow .. .. per lb.	0	0	8
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	0
,, Muriate, 80 % ,, ... ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	4½
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % .. nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	5	0
,, ,, (Carb. Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Soda Crystals) .. .. .. ,, ,, (f.o.r. w'ks.)	2	10	0
,, Acetate (ex-ship) .. .. ,,	12	15	0
,, Arseniate, 45 % .. .. ,,	13	10	0
,, Chlorate .. .. per lb.	0	0	3¾
,, Borate (Borax) .. .. nett per ton	15	15	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton (10 ton lots)	7	12	6
,, ,, (74 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	0	0
,, ,, (60 % Caustic Soda) .. ,, ,, (10 ton lots)	6	0	0
,, ,, (pure liquor 90° Tw.) .. ,, ,, (10 ton lots)	3	10	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate (cwt. kegs) .. .. ,,	6	15	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25 % .. .. ,,	15	10	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	8	0
,, Nitrite, 98 % .. .. per ton	26	0	0
,, Phosphate .. .. ,,	10	7	0
,, Prussiate .. .. per lb.	0	0	0
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	10	0
,, Stannate, 40 % .. .. per cwt.	3	10	0
,, Sulphate (Salt-cake) .. .. per ton	1	8	0
,, ,, (Glauber's Salts) .. .. .. ,,	1	15	0
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	4	15	0
Strontium Hydrate, 100 % .. .. ,,	9	10	0
Sulphocyanide Ammonium, 95 % .. .. .. per b.	0	0	5½
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton	7	0	0
,, (Roll Brimstone) .. .. ,,	6	0	0
,, Brimstone: Best quality .. .. ,,	4	12	6
Superphosphate of Lime (26 %) .. .. ,,	2	10	0
Tallow .. .. ,,	24	0	0
Tin Crystals .. .. per lb.	0	0	7¼
,, English Ingots .. .. per ton	121	0	0
Zinc (Spelter) .. .. ,,	28	10	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	7	10	0
,, Sulphate, Crystal .. .. ,,	7	15	0

THE

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LATE ADVERTISEMENTS.

TENDER.

TENBY GAS CONSUMERS' COMPANY, LIMITED.

CONTRACT FOR TAR AND LIQUOR.

THE Directors of the above Company invite Tenders for the Tar and Ammoniacal Liquor produced at their Works at Tenby during one or more years.

Particulars as to quantities may be obtained from the undersigned.

Tenders, endorsed "Tender for Tar, etc.," addressed to the Secretary of the Company, C. W. R. Stokes, Esq., to be sent in on or before the 24th inst.

ALFRED H. BROOKMAN,
Engineer and Manager.

Gas Works, Tenby,
May 5, 1899.

WANTED, PARTNER (active or sleeping), with about £2,000., to develop an established manufacturing Chemical Business in Hull. Will bear investigation. Good connections (home and abroad).—Apply, Barker and Mayfield, Solicitors, Hull.

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RAILWAY TANK TRUCKS, in good condition, WANTED.—Apply, "Tanks," *Chemical Trade Journal* Office, Manchester.

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CURRENT TOPICS.

LEAD POISONING IN POTTERIES.

DURING the last few months we have given consideration and space to the inquiries of the Home Office, and the reports of the experts engaged to investigate the serious question of lead poisoning. It is only fair, therefore, that we should give equal prominence to the reply made by the allied Potters' Associations to the Home Office report.

In the first place, let it be henceforth known to, and clearly understood by, al those zeal-blinded reformers, who would abolish anything and everything in order to protect the health of nobody in particular, that it is the incorrigible pottery manufacturers who unanimously agree, and have publicly declared, that they believe the time has come when the use of raw lead in glazes may be prohibited, and are convinced that the regulations suggested if faithfully carried out by both masters and operatives, with the aid of an increased staff of competent inspectors, are sufficient to remove the evils which we all deplore. This admission will, of itself, dispose of the pleas raised by a large number ot ardent but inexperienced reformers.

There is, however, one simple—and we think wholly justifiable—request which is made in conjunction with the above admission, namely, that sufficient time be given to those manufacturers who are inexperienced in the use of fritted lead compounds to experiment with the same, and familiarise themselves with their use before their adoption in manufacturing processes is enforced by law.

In reference to this request another suggestion is also made, which indicates a line of policy which we wish could be more often adopted when dealing with the proposals of the Government for the regulation of other "dangerous trades." It is this. Since certain manufacturers, who have experience of "fritted" lead glazes, have offered to draw up such practical information as may help the trade in this direction, let this information be printed by the Home Office and issued to all pottery manufacturers in the kingdom.

The exact composition of the lead fritts which will answer individual requirements must be a matter for considerable experiment, as no one can say off-hand what compositions will suit different purposes, and therefore in order to expedite such experiments let the Government laboratory be allowed to determine the solubility of any fritts submitted for that purpose.

There is both reason and wisdom in this requisition. Reason - because it is the duty of those who would enforce changes to help in the elucidation of the new methods. Wisdom—because a check would be kept upon the "preventive" efficiency of the fritts, and the official supervision will spur on those manufacturers prone to dilatoriness.

THE USE OF OXYGEN EXTENDING.

Apart from the uses of oxygen as a resuscitant, about 18 months ago we were able to afford our readers some inter-

esting information concerning the medical employment of oxygen in the treatment of ulcers and malignant wounds.

As the outcome of the successful application of oxygen to such cases by Dr. Geo. Stoker, the Oxygen Home was started in London, at 2, Fitzroy Square, and on Wednesday this week the third annual meeting of the Home was held. Since the Home was opened 231 cases have been treated, out of which 172 have been cured. Last year 101 cases were treated, and 66 cured. From the study of these cases, fresh light has been thrown upon the action of the oxygen which tends to confirm the theory that toxins secreted by certain micro-organisms are converted into oxy-toxins, or antidotes, which are absorbed and neutralize the action of the poisonous toxins. Those familiar with the troublesome sores contracted in the manufacture of bichromates, &c., will be interested to hear of the success of the oxygen treatment, as it gives promise of utility in other directions.

ANGLO-FRENCH TRADE IN 1898.

JUDGING by the character and amount of our trade with France, the figures are rather encouraging than otherwise; for they seem to show that, while we can supply our wants without difficulty from other sources, France, notwithstanding the increase in her coal production, still finds this country the best market for the supply of what she needs. As evidence, we have the fact that, while French imports from Great Britain fell off only £27,479. last year, her exports to us declined no less than £3,747,937. The total imports from Great Britain amounted to £19,388,4 0., against £19,415,800. in 1897, this branch of the trade being to all intents and purposes unchanged. The exports to us, on the other hand, fell from £45,291,600. in 1897 to £41,543,600.

Notwithstanding the falling-off in the trade between Great Britain and France in 1898, the exports to England formed 29 65 per cent. of the foreign trade of France, while the imports from Great Britain amounted to 11·08 per cent., which is, however, £22,155,200. less than what was taken in exchange from France.

French exports in excess of imports are greatest in the case of Great Britain, amounting to £22,155,200., Belgium showing £9,533,700., Switzerland, £4,766,200., Germany, £2,753,300., and Italy, £176,600.

Chemicals.—The importation, as well as the exportation of chemical products, other than nitrates and the products derived from coal tar, is progressing. The exports of chemical products amounted to £1,756,000. in 1894; £1,940,000. in 1895; £2,088,000. in 1896; £2,484,000. in 1897; and £2,536,000. in 1898; while the exports were £1,552,000. in 1894; £1,776,000. in 1895; £2,286,000. in 1896; £2,356,000. in 1897; and £2,708,000. in 1898.

The increase in the imports of raw caoutchouc and guttapercha corresponds with a reduction in the imports of manufactured goods. The quantity of raw material imported rose from 4,724 tons in 1897 to 5,216 tons in 1898, while the value of the imports of manufactured goods fell from £436,000. in 1897 to £412,000. last year, and the exports from £388,000. in 1897 to £368,000. in 1898.

In conclusion, the following statistics relating to our Anglo-French trade are of interest. In both the imports and exports the articles marked with an asterisk showed an increase, and those unmarked a decrease:—

	1897. Francs.	1898. Francs.
IMPORTS.		
*Indiarubber and guttapercha (raw) ..	4,393,627	6,904,000
*Tin (raw)	1,163,781	1,387,000
*Colours and paint	1,328,851	1,427,000
*Oilseed cakes..... ..	847,402	1,063,000
*Manure (except chemical)	761,979	815,000
*Lead	545,202	676,000
*Bismuth	269,640	544,000
Chemical products.....	26,335,265	23,952,000
Bitumen and coal tar	6,799,874	5,426,000
Oils.....	4,607,538	2,762,000
Nickel	478,312	280,000
EXPORTS.		
*Copper	32,971,509	40,332,000
*Indiarubber (raw)	2,060,583	2,086,000
*Colours and paint	1,566,978	1,612,000
Chemical products	14,866,143	14,007,000
Oils.....	11,762,931	9,411,000
Dyes	2,125,593	1,996,000
Glue	3,026,219	2,988,000

Reports of Companies.

BORAX CONSOLIDATED, LTD.

AMALGAMATION CARRIED THROUGH.

The first ordinary general (statutory) meeting of the shareholders of Borax Consolidated, Limited, was held on Wednesday, at Winchester House, Old Broad-street, E.C., under the presidency of Sir Alex. Wilson (the chairman of the company).

The Chairman said: This is the statutory meeting of the company which, as you probably are aware, has to be held within four months of the registration of the company. Generally speaking, there is no business to be transacted at the statutory meeting, but as you will have observed from the notice that has just been read, there are certain alterations and additions to the articles of association which I shall have to propose, and to which I shall more particularly allude shortly. But before coming to that you will doubtless expect to hear something about the progress and position of the company. You will remember that the company was formed for the acquisition of various borate mines and deposits, and borax refineries in different parts of the world, and for the amalgamation and consolidation under one management as from September 30th last of the business of a considerable number of companies and individuals. (*Vide C.T.J.* 609. p. 33) By the arrangements made, we were able to provide for the various concerns being carried on without any interruption in the continuity of their business, and all profits made since October 1st last accrue to this company. With regard to the transfer of all the various properties to the trustees for the debenture-holders, the work of the lawyers has been very heavy. However, I am glad to tell you that very great progress has been made in this direction, and I hope that in a week or two's time the work of the lawyers in this matter will be complete. Only on one point has any difficulty been experienced, and that is in connection with the transfer of the property of the Borax Company, owing to the action of a debenture-holder in that company. (See p. 317.) With regard to this, however, I am glad to say that the obstacles are now practically overcome. My friend, Mr. Lawrence, informs me that about 95 per cent. of his debenture-holders have already given written assent to the transfer, and that he considers but little further difficulty is to be looked for in this connection. And now to turn to what after all will be of greatest interest to you gentlemen, viz., the

PROGRESS OF THE COMPANY

since its incorporation, and the profits of the various amalgamated businesses since October 1st last, the date from which they were taken over by the new company. It has as yet been impossible to complete the accounts of the numerous undertakings up to March 31st last, owing to the fact that returns have to be received from all parts of the world

£100,000. PROFIT IN SIX MONTHS.

I am able to make to you the very satisfactory announcement that the profits for the six months are not less than £100,000., and therefore exceed by at least 20 per cent. the estimate of the profits set out in the prospectus, and that the result of the six months working is sufficient to provide the interest on the debenture stock, the dividend on the preference shares, and the sinking fund for the whole year, and to leave a substantial balance towards a dividend on the ordinary shares and reserve funds.

PRESENT POLICY.

Every effort is being made to rely rather upon a low cost of production than upon inflated prices of products for our profits, as thereby consumption is stimulated and competition by others rendered very difficult. Satisfactory arrangements have been completed with the most important refiners in various countries, by which they rely solely upon the company for their crude material, and agree to abide by the company's selling prices for refined borax, etc. A steady output from the mines is thereby ensured, which is very necessary for economical working.

A HOPEFUL FUTURE.

As regards the future I am very hopeful. The demand for borax appears to be steadily progressing, and there are various new processes which are still in the experimental stage, in which borax plays a very prominent part, and any one of which might, if successful, very largely extend the field of the company's operations, and I believe that in a very short time this company's debenture stock and preference shares will rank amongst the soundest and most sought after of industrial investments. It will probably be within your recollection that the prospectus stated that certain options had been acquired by the company on various properties, which were then being investigated. The directors have had several reports before them, and while some of the properties offered have been rejected as valueless to the company, it may be to its interests to make some further acquisitions. And you will recollect that £200,000. of the debentures authorised have been reserved for the purpose of such further acquirements. Before turning to the business before us I shall be glad to answer any questions.

No questions having been asked the meeting resolved itself into an extraordinary general meeting, for the purpose of altering the articles of association to meet the views of the Stock Exchange.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Storage Batteries. R. Welford. 8,522. April 24.

An Improved Rubber Substitute. A. Cairns. 8,579. April 25.

Improved Tanning Process. F. Schedlinsky. 8,590. April 25.

Improvements in the Manufacture of Abrasive Soap and like Materials. W. W. Pilkington and W. R. Ormandy. 8,652. April 25.

Improvements in Chemical Fire Extinguishers. A. H. Van Riper and P. F. Guthrie. 8,853. April 25.

An Improved Explosive. T. W. Kelly, G. H. Bell, and R. N. Kirk. 8,679. April 25.

An Improved Explosive. T. W. Kelly, G. W. Bell, and R. N. Kirk. 8,680. April 25.

Apparatus for Indicating the Density or Volume of Smoke. V. Aicher. 8,686. April 25.

Improvements in the Manufacture of Salammoniac and Apparatus therefor. L. Wertz. 8,766. April 26.

Manufacture of Matches. A. J. Boult. 8,767. April 26.

Improvements in Evaporating or Concentrating Apparatus. J. McNeil and C. McNeil. 8,814. April 27.

A Process for Purifying Waste Distillery Liquors. W. S. Squire. 8,821. April 27.

Improvements in the Process of and Apparatus for Extracting Oil from Seeds or suitable Oil containing Substances by means of Solvents. G. E. Davis and A. R. Davis. 8,872. April 27.

The Manufacture and Application of White Lead and other Paints. S. Pope, F. Pope, and H. Pope. 8,875. April 27.

Treating Corrodible Metals to Prevent Oxidation. F. P. Morris. 8,877. April 27.

Filtering and Drying Sewage and other Matter. J. Murrie. 8,916. April 28.

Improvements in the Manufacture of Oxygen. J. Bilbie and J. A. Wanklyn. 8,923. April 28.

Apparatus for Use in the Oxidisation of Liquids and other similar Processes. J. McCulloch. 8,977. April 29.

Electrolytic Means and Apparatus for Converting Metals and Metallic Ores into Oxides. T. G. Hodgson and E. Bailey. 8,995. April 29.

Improvements in the Manufacture of Copal Varnish. S. Banner. 9,028. April 29.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in Apparatus for Purifying and Softening Water. W. S. B. McLaren, 56, Ashley Gardens, Westminster, and H. Carrod, 6, Ledbury-road, S. Croydon. Eng. Pat. 5,119. March 8, 1899.

This specification relates to a mechanical arrangement for softening water by chemical means, and is a modification of patent 16,295, 1895. The reagent and mixing tanks are carried on pillars above the settling tank, which is provided with suitable baffle-plates. The reagent tanks are placed one within the other to save room, the size of the inner tank being such that its holding capacity is equal to that of the outer tank. There are two drawings illustrating the plant, which is otherwise much the same in arrangement as the majority of water softening plants.

Improvements in Processes of Dephosphorising Steel and other Metals. J. Gordon, c/o E. Johnston, Son, & Co, Rua Sao Pedro, Rio de Janeiro, Brazil. Eng. Pat. 12,651. June 6, 1898 (under International Convention, Nov. 12, 1897).

The steel to be dephosphorised is treated with the oxides of the rare earths, which have a greater affinity for phosphorus than lime or magnesia. Alloys of the metals of these earths, or the carbides, cyanides, silicates, and other salts of the same may be used. In practice the carbides previously alloyed with iron or ferro-manganese have been found to afford the most effective means of applying these rare earths. This method of treatment is equally applicable to both the open hearth and the Bessemer processes. The amounts required can readily be calculated from the chemical equivalent of the rare earth used and the quantity of phosphorus in the steel. Thus in the case of cerium oxide the requisite amount is about five or six times greater than the percentage of phosphorus which is present.

An Improved Process for Obtaining Purified Silicic Acid and Fluo-Silicic Acid from the Residual Mixture Obtained in the Purification of Graphite, by Means of Dilute Fluoric Acid. S. Douglas, 6, Lessingstrasse, Berlin. Eng. Pat. 23,876. November 12, 1898.

The use of fluoric acid for purifying graphite has hitherto been too expensive, but the patentee proposes to make its employment practical by turning the resulting bye-products to account. The liquid left after treating the graphite generally has a sp. gr. of about 1·2, and contains approximately 75·32 per cent. of water, 2·25 per cent. of alumina, 1·01 per cent. protoxide of iron, 20·55 per cent. of fluo-silicic acid, and 0·87 per cent. of silicic acid. This is distilled under reduced pressure, yielding a distillate containing almost chemically pure silicic acid, and leaving a residue composed of fluoride of iron, alumina, &c. This residue is employed in the production of fluoric acid, conjointly with sulphate of alumina, or converted into cryolite. Almost all the fluoric acid originally used in purifying the graphite is thus turned to account.

Process for Raising the Point of Fusion or Preventing the Liquefaction of Resins, Wax, and Wax-like Substances, Pitch, and Tar. A. Gentzsch, VII. Stiftgasse No. 1, Vienna. Eng. Pat. 4,902. March 6, 1899.

The material to be treated is heated to between 100° and 200° C. Water is then allowed to drop into it from a suitable height, the material being constantly stirred all the time. The drops of water must not fall quick enough to form a stream. The process is facilitated if the water is saturated with carbonates, hydroxides, and sulphates of lime, magnesia, and iron, as usually found in hard waters. The drops of water falling into the hot liquid mass are at once converted into steam, and cause the material under treatment to become more viscous. When the required state of viscosity is reached, the water is stopped, and the mass heated to ensure the removal of all aqueous particles.

Improvements in Apparatus and Vessels for the Manufacture and Use of Acetic Acid. C. Dreyfus, "Claremont," Wilbraham Road, Fallowfield, Manchester, and A. G. Green, 13, King's Drive, Heaton Moor, near Stockport. Eng. Pat. 20,445. September 27, 1898.

A trial of several months having demonstrated that aluminium is practically unattacked by either weak or strong acetic acid, its use for the construction of vessels and apparatus used in the manufacture of this acid, organic acetyl derivatives, &c., is suggested.

ANSWERS TO CORRESPONDENTS.

S.P. (HAMBURG).—For the information you require write to Mr. J. E. Thornton, Rokeby, Altrincham, near Manchester, mentioning the Journal.

C.M.—When the matter is settled, we will remit you for the whole.

B.C.L.—It has been sent. Extra copies are charged 4d., post free.

B.I.—The matter is quite in order now.

EXPLOSION AT A CHEMICAL WORKS.—An alarming explosion occurred late on Tuesday night at the chemical works of the Clayton Aniline Company, Clayton, near Manchester. Two police officers who were on duty in the neighbourhood saw a flash of light, and directly afterwards there was a loud report. The explosion, which occurred close upon half-past ten, shook the ground, and the concussion was felt some distance away. It caused great alarm in the district, and a crowd speedily gathered in the vicinity of the works. Inspector Fletcher, one of the two officers, at once proceeded to the Brook-street fire station to notify the occurrence. A constable reported that a man named James M'Nicholls, aged 19, by occupation a stillman, and living in Mill-street, Bradford, had received injuries to his right leg and a severe shock, having been struck by the falling *debris*. There is no information as to the cause of the explosion.

GERMAN CHEMICAL FIRMS EXTENDING.—The Badische Anilin und Soda Fabrik of Ludwigshaven, has duly passed resolutions for the increase of the share capital by £90,000. to a total of £990,000. by the issue of 1,500 new £60. shares, which are to be offered to the shareholders at a price of 350 per cent. of the par value, that is, apparently, at £210., in the proportion of one share to every ten of the old shares. The option is to remain open to the old shareholders until May 15th. This new issue is for the purpose of extending the Company's works, specially with reference to the production of artificial or "synthetic" indigo, as well as for the general improvement of the plant. For the last two years the dividends of the Company have been at therate of 24 per cent. per annum on the par value of the shares; the new issue is to rank for half the current year's rate of distribution. At their ordinary meeting another great German dye-manufacturing company—Meister Lucius and Brüning, of Höchst-am-Main—declared a dividend of 26 per cent. for the past financial year, following a similar dividend for the previous year. Resolutions for the increase of the share capital by £100,000. have also been adopted. The additional issue is to consist of 2,000 £50 shares, to be allotted in the proportion of two new shares for every 15 old shares, at a price of 325 per cent., or, say, £162 10s.

THE FRENCH AND GERMAN OIL TRADES.

[SPECIALLY CONTRIBUTED.]

OILS and greases of all kinds enter so largely, nowadays, into manufacturing industries, that one can often form a fairly correct estimate of the amount of progress, or otherwise, that is being made, by the movements of these commodities. While admitting oil producing substances free of duty, France has endeavoured to stimulate the seed crushing industry by protection; so that in this case, at least, we have to look principally to the imports of oleaginous grains. There are five kinds which figure very prominently with, of course, a number of less important ones. Foremost among them is linseed, the imports of which fell off very materially last year as compared with 1897. This was mainly in consequence of reduced shipments from Russia and the Argentine Republic, the former country having provided 11,000 tons only as compared with over 50,000; the latter less than 30,000 tons against some 56,500 the previous year. These heavy deficiencies were partly made good by increased supplies from India, which yielded France 67,000 tons as against 27,000, so that the net loss was just about 30,000 tons; the exact figures for 1898 and 1897, respectively, being 111,500 and 142,000 tons.

This was more than made good by gains in the others. Copra nuts are second in importance as regards value, and here the quantity increased from 68,000 tons in 1897 to over 74,000 last year. The countries of origin are not stated, but the Philippines and India are invariably the chief sources of supply, with smaller quantities from Africa, the Dutch Indies, and the Pacific isles, though it is not yet possible to say which of these yielded the increase. But perhaps the most satisfactory feature, from a purely French point of view, was the very considerable gain in earth-nuts, the principal source of supply being the French possession of Senegal, which yielded 66,000 tons against some 38,000 only the previous year. Spain and the Argentine Republic provide small quantities, but most of the further increase was from British possessions in Africa, which gave 25,000 against 21,000 tons. The total was 93,000 tons against 61,000 in 1897.

Next in importance rank sesame seeds, in which there was likewise a considerable increase, as from 54,000 tons in 1897, the quantity rose to over 68,000 last year. India more than accounted for the difference, as the respective shipments were 36,500 and 60,000 tons, but this was offset to some extent by a decrease in the import from Turkey from 14,000 tons in 1897 to 7,500 only. Finally, we have mustard and colza seeds, which also showed the large gain from 54,000 to 76,000 tons, nearly the whole of it again from India; indeed, that country supplied 73,000 as compared with 46,000 tons in 1897, while other countries, principally Russia, diminished from 7,750 to 2,750 tons. Before recapitulating these for easier comparison, we must mention cotton seed, which, though a much smaller item than any of the others, is nevertheless a somewhat important one The gain in this instance is not very striking, from 53,000 to 56,000 tons only; and, practically, the whole supply is from Egypt. The United States crush or make other use of their seed, and of the many millions of tons produced, shipped, last year, only 1,800 tons to France The quantities and respective valuations for the last three years are then as follows, but it must be borne in mind that 1898 valuations are temporarily based on 1897 prices, which will not, however, make any great difference in the final returns:—

	Quantities in tons.			Values in £. sterling.		
	1895	1897	1898	1896	1897	1898
Linseed	135,000	142,000	111,500	£1,250,000	£1,400,000	£1,100,000
Earth Nuts	54,000	61,000	93,500	425,000	540,000	800,000
Copra Nuts	81,000	68,000	74,000	1,025,000	825,000	900,000
Mustard & Colza ..	46,000	54 000	76,000	450,000	475,000	700,000
Sesame	86,000	54,000	68,500	925,000	650,000	800,000
Cotton Seed	31,000	53,000	56,000	160,000	290,000	300,000
	433,000	432,000	479,500	£4,235,000	£4,180,000	£4,600,000

Last year's total consequently shows an increase of about 10 per cent. over both 1897 and 1896 But as a set off against this must be noted a great decline in decorticated earth nuts, which from nearly 50,000 in 1896 fell to 7,000 tons in 1897, and barely 5,000 last year; the value dropping from £450,000. to £50,000. There are no other such striking movements, though the tendency in the minor grains is to recede rather than increase. Thus, two years ago, the import of palm kernels was nearly 20,000 tons, valued at £175,000; last year it had fallen to 13,000 tons, worth £115,000. In poppy seeds imported principally from India the drop was from 23,000 and 24,000 tons in 1896 and 1897, respectively, to barely 18,000 tons last year, and in valuation from over £250,000. to less than £200,000. In miscellaneous and unenumerated descriptions there was on the whole a similar movement, so that compared with two years ago the trade has distinctly gone back.

This is all the more remarkable because, despite the duty on oils, whether crude or refined, the import has greatly increased, and affords one more proof of the utter inadequacy of protection in France. The most important is cotton seed oil, and the duty is equal to rather more than £2. 10s. per ton, say about 15 per cent. ad valorem. Nevertheless the import of 28,000 tons in 1896 just doubled in 1897, and increased further to 66,500 tons last year, the value meantime rising from just over £500,000. to £1,100,000. It is mostly American oil, the supply of which increased from 23,000 tons in 1896 to 60,000 in 1898. English seed crushers supplied 6,000 tons in each of these years, but in 1897 the quantity was 10,500 tons. The import of olive oil has not greatly varied in the three years, the quantity being somewhere about 23,000 tons, and the value £500,000. But the sources of supply have changed greatly, and when France cannot get what she wants in one country, she has to seek it in another. Thus, in 1896, Tunis provided 6,700 tons; this rose in 1897 to 10,000 tons, but fell last year to 4,000. Tunis, as a French protectorate, enjoys exemption from the import duty. To make good this deficiency 12,000 tons had to be drawn from Spain in 1898, against 2,750 only in 1897 and 5,000 in 1896 Algeria fluctuates between 1,200 and 1,800 tons, but Italian supplies fell from a previous average of 8,500 tons to under 5,000 in 1898. Palm oil again shows no great change in the totals, but a somewhat remarkable one in the sources of supply. In 1896 French West Africa furnished about 9,000 tons and British West Africa under 3,500; in 1898 the respective quantities were 6,500 and 9,000 tons. In the former year 3,700 tons were obtained from other West African territories, in the latter scarcely any. The net result was an import of about 16,000 tons, valued at a little under £250,000. in each year, the intermediate one, however, 1897, showing 11,750 tons only, valued at £170,000. These three are the only oils of any consequence imported for industrial purposes, the total in 1898 being 105,000 tons and the estimated value £1,750,000. In all other cases the duties levied appear to be operative, and to afford ample protection to French seed crushers, as of linseed oil the import was under 200 tons, and of the others even less. There is still another product to note, namely, tallow, but despite its inclusion in the free list, the import is a declining one. In 1896 the total was 27,750 tons; in 1897, 25,000 tons, and last year, 20,000 tons, the value being estimated at £350,000. It is drawn principally from the United States and the Argentine, and it was the latter country to which the falling off was due Uruguay furnishes a little and Great Britain a fair quantity, Russia and Australia practically none at all.

The trade in these products is distinctly an import one, though there are moderate shipments both of tallow and refined oils. Of the former, France supplies adjacent countries like Holland, Belgium, Switzerland, Spain and Italy with part of their requirements, and in this way the total ran up last year to nearly 15,000 tons against little more than 10,000 in 1897, so that taken in conjunction with the diminished import, very much less was retained for home consumption. Is the exorbitant price of soap rendering the French people indifferent in the matter of cleanliness? The export value of all kinds of vegetable oils was just £1,000,000, a falling off of £100,000. compared with 1897. The largest single item is seasum oil, of which nearly every country in Europe is a buyer, though the total was only some 14,000 tons, valued at a trifle over £250,000. For castor oil, Great Britain is the principal customer, and of this the total shipments last year were 8,100 tons, valued at £175,000. Cocoanut and allied oils find their principal demand in Austria and Italy, but here there was a smart decline in the total from 12,000 tons in 1897 to 7,000 in 1898, the value being £135,000. Olive oil, though a French speciality and distributed throughout almost every country in the civilised world, is in such small quantities that it only occupies the fourth place with 5,150 tons, valued at £130,000 It is, moreover, steadily declining in favour, as the figures for 1897 and 1896 were, respectively, 5,750 and 6,500 tons. Colza oil found buyers principally in Great Britain, Germany, and Belgium, to the extent of 6,600 tons, valued at barely £100,000. Cotton oil is the one improving branch of the trade, and this is due to a demand from Algeria. The total shipments, which were under 500 tons in 1896, rose to 2,850 last year. One would like to feel quite sure that some of it does not reappear in the exports of olive oil. None of the others reach more than a moderate quantity or value. The export of oleaginous seeds and nuts is quite trifling, the total value being only £175,000. Earth nuts, both in the shell and decorticated, colza nuts and linseed account for nearly the whole of it.

The German trade in oils and oleaginous substances runs on somewhat different lines to that of France, for though the total is greater, it is made up principally of three descriptions only. There are three others handled in moderate quantities, and to render comparison easier the figures are set out in tabular form as before for 1897 and 1898.

	Quantities in tons.		Value in £. sterling.	
	1897	1898	1897	1898
Linseed	260,000	270,000	£2,240,000	£2,300,000
Rape Seed	120 000	120,000	1,330,000	1,330,000
Palm Kernels, Copra, &c.	117,000	115,000	1,130 000	1,120,000
Sesamum Seed.....	21,000	31,000	270,000	400,000
Poppy Seed.....	23,000	25,000	250,000	280,000
Earth Nuts	15,000	13,000	150,000	130,000
	556,000	574,000	£5,370,000	£5,560,000

The valuations for both years it must be remembered are still on the same basis. Germany, moreover, does not afford quite the same

universal incentive to the seed crushing industry as France. Linseed and palm kernels are admitted duty free, but on all the others in the list, rape seed included, there is an import levy of £1. per ton. The sources of supply likewise differ, Germany obtaining more linseed from Russia than from any other country. The quantity last year was 106,000 tons, against barely 100,000 tons from India, and 30,000 from the Argentine. 23,000 tons of the remainder was received from Holland. Rape seed, of which the French, in striking contrast to the German import, is only a few thousand tons, is principally of eastern origin, 95,000 being from India, 16,500 from Russia. Of the total, however, about one third escaped the payment of duty, by the declaration of shipment of the oil or of use in manufactures subsequently exported. The third item includes more palm kernels than copra nuts, as of the total nearly 77,000 tons was imported from British West Africa. A further 21,500 tons, no doubt of the same commodity, was received from Great Britain, but less than 4,000 tons from German West Africa. The copra is represented by 9,200 tons from India, and 1,200 tons from the Dutch Indies. The sesamum seed is also from India with the exception of 2,500 tons imported from Turkey, and 1,500 from Portuguese East Africa. Turkey likewise supplied 2,000 tons of the poppy seed, and Russia 1,000 tons, India the remainder. French West Africa yielded 8,500 tons of the earth nuts, other possessions in Africa the rest. The product of nearly the whole of these, however, was reshipped, and so escaped duty. German manufacturers have to rely principally on the oil extracted from linseed, rapeseed, and palm kernels, beyond the fatty substances they can utilise of home production.

Of other oil seeds the import is but trivial. Mustard seed is the most important of them, the quantity last year reaching 3,820 tons against 3,550 in 1897. Cotton seed is on the free list, nevertheless the weight was only 1,750 tons, practically all of American production, comparing with 900 tons the previous year. Castor oil seeds from India amounted to 920 against 400 tons only, and unenumerated oil seeds, mostly of Russian origin, 2,200 tons.

The German seed crushing industry is a protected one, and the import of oils, therefore, is not very great. Cotton seed oil is by far the most important; so far the oil mills of the United States have successfully resisted all attempts to attract the seed to other countries at the expense of its product. On oil "denaturalised by the administration" the duty is £2. per ton, and the import was 22,000 against 16,000 tons in 1897, the estimated values being £290,000. and £215,000. respectively. On refined oil the duty is £5., nevertheless the import amounted to 16,250 tons, and compared with 14,000, valued respectively at £220,000. and £190,000. Of the former the United States supplied 115,000 tons, and of the latter 13,750: Great Britain figuring for 10,000 tons of the first, but only 1,200 of the second, Holland coming in for the remainder. Olive oil in casks ranks second, the denaturalised for 8,950 tons, which is duty free, against 8,650 in 1897, and the refined, on which the duty is £1. 10s., for 3,150 tons against 3,700. The respective values for 1898 were £215,000. and £135,000.; of the former Italy furnished 4,600 tons, Spain 2,500, and Turkey 1,200, France only a trifling quantity. Of the refined, however, nearly 1,000 tons was French, and rather over 2,000 Italian. The value of eating oils in bottles, supposed to be olive oil, and nearly all French, was £16,000, but there were also cheaper cooking oils, likewise principally French, in barrels, the total weight of which was 3,500 tons and the value £90,000. Palm and cocoanut oils, upon which the duty is £1. per ton, were valued at £210,000., the quantity of 13,500 tons being the same in both years, 6,000 tons was from British West Africa direct, and rather over 3,000 tons through Great Britain. German West Africa supplied 1,400 tons, France and Belgium smaller quantities. The import of 1,150 tons from India was doubtless cocoanut oil. Linseed oil, upon which the duty is £2., fell from 15,000 tons in 1897 to 11,000, last year. 8,800 tons of this was Dutch and 1,700 British. Oleic acid, paying £1. 10s. per ton, improved from 9,500 to nearly 11,000 tons, valued at £140,000. Belgium supplied half, and of the other half Holland 2,000, France 1,500, and the United States 1,000 tons; Great Britain only 700 tons. The value of rape oil was only £20,000., and the import declined from 1,750 tons in 1897 to 970 only last year. All other oils for manufacturing purposes amounted to 4,100 tons, valued at £175,000., and were principally of French and Belgian extraction. There was a decided increase in the import of tallow, which from 16,650 tons in 1897 rose to 24,000 tons last year. The United States furnished the largest quantity, 9,500 tons, and 2,500 was received direct from Australia. British markets were drawn upon to the extent of 8,500 tons; South America shipped very little direct. In this instance again there is a duty of £1. per ton.

Germany has practically no export trade in these commodities, either before or after extraction, the import being limited to requirements for home consumption. The total value of the shipments of oil seeds was under £150,000., of which, £65,000. was for linseed, and £55,000. for rape seed. In 1897 the export of the former was 21,000 tons, last year only 8,000, of which 4,000 came to this country, 1,600 went to Austria and 1,000 tons to Norway. Denmark and Holland took nearly the whole of the rape seed. With the exception of palm and cocoanut oil the same remark is applicable to that section of the trade. Of these, however, the export is actually greater than the import, amounting last year to 17,250 tons, valued at £270,000; Great Britain is the most important customer, taking 7,500 tons of the total; Austria and Switzerland following for 6,250 and 1,150 tons respectively. For rape oil there is just a moderate foreign demand, the ability of Germany to meet it being due entirely to the drawback allowed of the import duty. The quantity shipped was 3,750 tons, valued at £75,000., of which this country purchased 2,600 tons. In no other instance is there an export of more than a few thousand pounds in value. Even in tallow it is only £18,500., representing small shipments to Austria and Holland. Germany's fiscal policy in this instance, at any rate, serves her ill.

PEROXIDES FOR BLEACHING SEED OILS.

[SPECIALLY CONTRIBUTED.]

IT is surprising that hydrogen and sodium peroxides, which have found such a wide application in the bleaching of other bodies, should not have been brought into use in the treatment of oils, more particularly linseed and rape seed oils. The present method of refining these oils is by treating with sulphuric acid, which gives fairly good results, and the popular idea of the high cost of hydrogen peroxide on the one hand, and the possible danger of sodium peroxide on the other, probably accounts for the enterprising manufacturer not having given much attention to these bleaching agents.

In 1894, F. Burton was granted letters patent for "The Purification of Oils, Fats, and the like," the principle embodied in the process being the addition of sulphuric acid to the fat or oil to be treated, and the subsequent careful mixing in of the requisite quantity of sodium peroxide to neutralize this acid; the hydrogen peroxide so formed:—

$$Na_2O_2 + H_2SO_4 = H_2O_2 + Na_2SO_4$$

acting as the bleaching agent. He recommends the preliminary treatment of the oil with a separate quantity of sulphuric acid, but in making some trials in this connection the writer has found this wasteful and unnecessary.

There is no doubt that this process, with certain modifications, might be used with good effect on linseed and rape seed (colza) oils.

The writer has obtained excellent results by proceeding as follows, with La Plata linseed oil: –

Into a lead or copper vessel provided with a mechanical stirrer, capable of producing thorough agitation, is run 400 lbs. of raw oil, the temperature of which should not be above 70°F. The agitator is started and 1 lb. of sulphuric acid (1.75. Sp.Gr.) is slowly trickled in. After this has been thoroughly mixed in, which should have happened in a quarter of an hour, 1 lb. of sodium peroxide is slowly added. The addition should occupy at least one hour and the agitator should, of course, be kept running as quickly as possible. When the whole of the peroxide has been added, the stirring should be continued for at least twelve hours; when the sediment is allowed to fall, and the clear oil (which will now be of a very pale yellow colour, with a pleasant smell) can be run off and washed in the usual manner, first with hot, and finally with boiling water.

Linseed oil refined in this way is bright and limpid, and possesses a specific gravity rather lower than the raw oil.

HINTS ON USING SODIUM PEROXIDE.

Before leaving the subject of sodium peroxide it will not be out of place to make some remarks on the precautions necessary in using this compound. Curiously enough sodium peroxide can be mixed into a paste with linseed oil and allowed to stand for days without any violent reaction taking place, indeed, there is no perceptible elevation of temperature. In working the process described above, all danger of firing is avoided by the perfect agitation of the mixture. The stirrer should on no account be stopped during the twelve hours, as it is the meeting of dry sodium peroxide and sulphuric acid on the bottom of the vessel which must be avoided. In textile industries throughout the civilised world sodium peroxide is in daily and increasing use, a state of affairs which could not exist if any extraordinary precautions were necessary.

The quantities of acid and sodium peroxide should be adjusted so as to ensure a *slight* excess of the latter, as in all bleaching operations with hydrogen peroxides, the alkaline condition appears to be necessary.

The writer has obtained good results with rape seed oil by the above process, only, in this case sulphuric acid of 1·8 specific gravity may be used.

Whether hydrogen peroxide could be used to replace the sodium compound is a matter for experiment, it cannot be denied, however, that in the process described above, the sulphuric acid plays no small part in bringing about the ultimate result.

In using hydrogen peroxide with sulphuric acid the large quantity of acid necessary would tend to render the hydrogen peroxide inactive

and would necessitate the addition of a correspondingly large quantity of some alkali, such as ammonia or silicate of soda, to excite the bleaching action of the peroxide; nevertheless this bleaching agent, which finds such wide use in the treatment of wool, silk, straw, feathers, hair, bone, ivory, &c, must surely eventually be brought into line to serve in the refining of oils.

The writer is firmly convinced that any oil refiner who assidously applies himself to the utilisation of the advantages of sulphuric acid and sodium peroxide conjointly would, eventually, reap a rich harvest and be in a position to offer a refined oil of unequalled merit such as cannot be obtained by the present method of treatment by sulphuric acid alone.

Legal Intelligence.

MANCHESTER ASSIZES.

CHANCERY COURT.

(Before Vice-Chancellor Hall.)

OATES *v.* POTTER.

An application was made on Monday, in the above court, in an action brought by William Coape Oates and Francis Hamer Oates, owners of the Darcy Lever Old Hall Estate, against Messrs. E. B. Potter and Co., Ltd., for an injunction restraining the defendants, their workmen, servants, and agents from emitting or permitting to escape from their works and premises any noxious fumes, gases, effluvia, or smoke, so as to damage the property of the plaintiffs. In the alternative, an injunction was asked for to restrain the defendants from permitting the escape of such fumes in a greater volume than was allowed prior to the year 1881. Mr. Grant (instructed by Messrs. Fielding and Fernihough, solicitors, Bolton), appeared for the plaintiffs; and Mr. Maberly (instructed by Messrs. Hall and Son, solicitors, Bolton), for the defendants. Mr. Grant said the defendants were the owners of works adjacent to and on the east of the Darcy Old Hall Estate, where they manufactured chemicals, dyes, and similar products. Down to the year 1881 these works were of small extent, but between the years 1881 and 1884 they were enlarged to about three times their former size, and they had since been continually growing larger. At the same time the practice of emitting noxious fumes had been continued and extended, the effect being to destroy the vegetation upon the plaintiffs' estate. This was agricultural land let to a farmer. It was, in fact, a dairy farm, and would have been a very profitable one had it not been for the conduct of Messrs. Potter. Chemical refuse had also been deposited upon the verge of their land in huge heaps, and these being in a state of perpetual combustion volumes of injurious vapour and smoke were given off. These heaps had also constantly increased in size. In this way the value of the plaintiffs' property had been diminished. The defence was practically a denial of every allegation. It was contended that the accumulation of chemical refuse was a necessary incident to the defendants' business, and that it had always been deposited in a proper manner and according to the custom of such works. It was added that the works were situated in a manufacturing district, and had around them a considerable industrial population and many works of various kinds, such as chemical works, mills, sewage works, and collieries. An alternative defence was that the defendants had a prescriptive right to discharge such fumes to the extent to which they had in fact discharged them. The issue thus became a question of fact, and in order to prove their case it was necessary that the plaintiffs should go upon Messrs. Potters' premises and take samples of the vapours emitted. Therefore the present application was for an order authorising the plaintiffs to enter upon the premises for the purpose of observing the processes of manufacture, and the vats and retorts used, and to take samples of the various fumes and vapours emitted, and also to examine and take similar samples from the heaps of chemical refuse.—Mr. Maberly objected that the plaintiffs were beginning at the wrong end. It was not material to their case to find out what was going on inside the defendants' works. What they complained of was the effect upon their own land.—Mr. Grant said it was necessary to ascertain what fumes were escaping from the defendants' premises, and that could not be got at by standing upon the plaintiffs' land and collecting the fumes which were blown towards it. If Messrs. Potter would state what gases they emitted the scientific witnesses would be able to describe the effect they would have.—The Vice-Chancellor said in all these trade cases it was necessary to be extremely careful in allowing scientific men to examine the processes inside the works of one of the parties, because information thus acquired might be made use of for some other purpose than that for which it was obtained. The plaintiffs were entitled to the fullest inspection or discovery which was necessary for the purpose of their case, but he did not see that they required a careful investigation of the processes in the works. The defendants might, however, be interrogated as to the processes they employed and the materials they used. As to the chemical refuse he did not see any objection to that being inspected.—Mr. Maberly said the same objection applied in both cases. A sample of vapour taken on the defendants' land would be no guide as to what came upon the plaintiffs' estate, since in the interval between coming off the heap or passing out of the chimney and reaching the plaintiffs' land it would be considerably diluted, and thus be deprived of its noxious qualities.—Mr. Grant said unless they knew what fumes were given off they could not prove that they were the cause of the injury to the vegetation; and so it became absolutely necessary to make the examination at the works. They did not want to inquire into any secret processes, but merely to know what were the results, and the information asked for was regularly supplied to the inspectors appointed by the Board of Trade. Samples of fumes were taken from the chimneys and reported upon by these gentlemen. He was told that injurious effects were caused during rain by the rain falling through the fumes and forming a chemical compound. One defence set up was that the injury was caused by other people.—The Vice-Chancellor said if the defendants were sending off noxious fumes injurious to vegetation it would be no protection to them to say that other people did it. The right of inspection of works was very useful sometimes where the question was one of infringement of patent, or in such a case as one connected with colliery workings, where it was necessary to take measurements, but in the case of a nuisance the question was not what went on in the works, but what came out of them and reached the plaintiffs' premises. It was for the plaintiffs to prove two things, first, that something came from the defendants' works, and secondly, that it was injurious to their own premises. In the only case upon the point a similar application to the present one was refused, and here it seemed to him that if the plaintiffs were able to prove that an injury was done to the vegetation they would have no real difficulty in proving whether the noxious vapour came from the defendants' works. For that purpose it was not necessary that they should be allowed inspection of the works. The result was that he should make no order except that the costs be the defendants.—Leave to appeal was given.

MORE ABOUT THE ARSENIC WORKS.

THE subject of the arsenic industry, at Tavistock, Devonshire, and its relation to poor-law relief, came again before a meeting of the Tavistock Board of Guardians, on Saturday. It was stated by Mr. Sowden, that H M. Inspectors had been down respecting the arsenic works, and as manager of the Coombe Arsenic Works he had received a communication asking him to answer thirteen questions. He presumed that managers of other arsenic works in the district had received a similar communication.—Mr. C. Bolt thought it desirable that the Committee of Guardians and arsenic managers should be called together as soon as possible. Dr. Bowhay told him he never had such a dressing down in his life as he received from the inspector, because of the report that he and Dr. Brodrick had prepared. The inspector evidently came down biassed and prepared with every detail in the interest of the arsenic works, and discredited the doctors' report. Some influence had evidently been brought to bear, and if the Guardians could counteract it they should do so as speedily as possible. Dr. Bowhay was very much put out at the way he was treated by Mr. Martin, one of the inspectors. Dr. Bowhay had been asked to prepare a report relating to the whole Union. He believed that such a report would show that whereas men from other employments came on the rates, as a rule, at sixty years of age and above, arsenic workers sought relief when they were from thirty to forty years of age.—Rev. Dr. Bryant was much surprised that any Government official should have taken exception to the report of the medical officers, who had simply done their duty to the Board in preparing it.—Mr. Reskelly understood the inspector read things into the report which were not there, and tried to make some things in it appear in a different light to that in which they were intended. Dr. Bowhay took what was said to him as a "raking over," for not having reported the matter to the authorities himself. He thought the Local Government Board should have sent down an independent inspector, and not one who had been in the habit of visiting the works year after year.—The Chairman promised to call the Committee together as soon as possible.

ALLEGED CHANGES AT THE PATENT OFFICE DENIED.—It has been currently reported that the Board of Trade is considering a Bill for the purpose of introducing a system of examination into the Patent Office. As no such intention had become known to them, Messrs. Stanley, Popplewell and Co., made inquiry, and have received the following reply:—"Gentlemen, I am directed by the Board of Trade to refer to your letter of the 25th ultimo on the question of the Patent Office conducting validity searches before granting patents for inventions and as to the introduction into Parliament by the Board of a Bill on the subject. In reply, I am to state that the report to which you allude is unfounded, and that the Board have no such Bill at present under consideration."

COAL MINE AND QUARRY STATISTICS.

THE general report and statistics of mines and quarries in the United Kingdom during 1898 were issued recently. The total number of persons employed was 741,125, of whom 706,894 worked at the 3,249 mines under the Coal Mines Act, and 34,241 at the 752 mines under the Metalliferous Mines Act. As compared with 1897, these figures show that there is an increase of 11,681 persons engaged at coal mines, and 731 at metalliferous mines. Of the 706,894 working at the collieries 567,124, or about 80 per cent., were employed below ground, while of the 139,770 surface workers 4,617, or 3 3 per cent., were females. The total output of minerals at the mines under the Coal Mines Act was 215,161,954 tons, of which 202,042,243 were coal, 2,783,219 fire-clay, 7,901,046 iron-stone, and 2,137,993 oil shale; while sundry minerals totalled 297,453 tons. As a sidelight on the strike of last year it is noted that in the South-Western and in the South Wales districts combined there was a decrease of close upon 9,000,000 tons as compared with the previous year. The principal increases occurred in the Midland district, where the output exceeded that of the previous year by 1,972,559 tons; Liverpool district, 1,328,082 tons; Newcastle, 1,236,245 tons; Yorkshire and Lancashire, 1,581,602 tons; and Manchester, 453,405 tons. At the coal mines there were 828 separate fatal accidents, causing 908 deaths, a decrease compared with 1897 of 40 accidents and 22 deaths. At metalliferous mines there were 31 fatal accidents that caused 33 deaths, or an increase of two accidents and a decrease of 16 deaths. At quarries there were 131 fatal accidents and 134 deaths, an increase of 13 in the number of accidents and 11 in the number of deaths. The death-rate of underground coal workers was 1·37 per 1,000, this being the lowest annual death-rate ever recorded. The corresponding figure for 1897 was 1·49. At the metalliferous mines the death-rate of the underground workers was 1·34 per 1,000 persons employed, and of the surface workers ·43 per 1,000. The corresponding figures for 1897 were 2·11 and ·52 respectively. At the quarries under the Quarries Act the death-rate from accidents of the workers inside the actual pits or excavations was 1·59 per 1,000, and of the persons employed at factories and workshops outside the quarries, but connected with them, ·47 per 1,000. The corresponding figures for 1897 were 1·58 and ·46 respectively.

Trade Notes.

FOSTER *v.* THE BORAX CO., LTD.—In the Court of Appeal, on Wednesday, before the Master of the Rolls and Lords Justices Rigby and Collins, the case of Foster *v.* the Borax Co., Ltd., was down for hearing on appeal by the defendants from an order of Mr. Justice North, who had granted the plaintiff, a debenture-holder, an interim injunction restraining the company from carrying into effect an agreement for the sale of the business to Borax Consolidated, Ltd., without first making due provision for the payment of the debenture-holders whose assent to such transfer had not been obtained.—The Master of the Rolls, without calling upon counsel to go into the merits of the case, said he thought the proper order to make would be to discharge the order made in the court below on the defendants bringing £16,900 into court to the general credit of the action, the costs to be costs in the action.

PRESERVATIVES IN FOOD.—In the House of Commons last week in reply to Mr. A. Moore, Mr. Chaplin said it was intended to appoint a Committee to deal with preservatives in food, and the Committee was in course of formation at the present moment. It would be a departmental one. Mr. Channing asked if the Committee would report before the report stage of the Food and Drugs Bill. Mr. Chaplin replied that there was no chance of that, as the inquiry must take some time.

ALUMINIUM A RIVAL TO COPPER.—Mr. J. H. Griffith, of Leamington, writing to the *Financial News*, says:—"In your issue of to-day Mr. Merryweather refers to aluminium as a rival to copper. It may interest your readers to know that aluminium is being very extensively used in Birmingham. I have in my house a large standard lamp, several ornamental vases, photograph frames, a complete set of cooking utensils, and a bicycle, all recently made in Birmingham, by five different manufacturers, all made from a metal called Aluminard, which, I understand, is a repurified aluminium, harder and more easily worked than ordinary aluminium. I always understood that aluminium could not be brazed; but this metal aluminard can be brazed; for my bicycle is brazed throughout, and is entirely of that metal—frame, handle, lugs and rim. I have ridden it for six months with comfort. The price of copper and brass makes it important to have a substitute, particularly as aluminium is being used so much on the Continent."

THE MANCHESTER RUSSIAN OIL TRADE.—The direct importation of Russian petroleum to Manchester continues to find employment for a considerable fleet of tank steamers. The *Orange Prince* left the canal on Monday after discharging a cargo of 674,000 gallons into the Eccles storage tanks, and the *Baku Standard* is now at Eccles discharging about 1,500,000 gallons of petroleum from the same port. The *Rock Light* sailed from Batoum for Manchester on the 1st inst., with over 1,000,000 gallons, and the *Circassian Prince* is reported to be at Batoum loading 850,000 gallons for Manchester. So far as the Manchester Canal traffic is an index, the Russian oil easily maintains its ground in this district against its American rival, for by far the greater number of the oil-laden tank steamers that discharge in the canal are from Batoum.

NOT ONLY CHEMICAL WORKS.—A correspondent of the *Liverpool Daily Post* points out that it is incredible in these days of general enlightenment that the washings from the lead ore crushing mills at the Llanfair Mining Company's works should be permitted to flow straight from these mills into the river Elwy, transforming that once beautiful river into a stream of blue-grey poisonous mud. Thousands of people have to rely upon this water for drinking and domestic purposes generally, and as the tract of country through which the river meanders is for the greater part meadow land, valuable cattle and horses must have free access to this insidious poison, for lead is soluble to some extent in pure water. Public health demands that an injunction should be granted to stop these washings until proper filtering beds are provided. The conservators of the Conway river are compelling the lead mines near Trefriw to make such provision.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are easier, and the bare 7d. has been touched for 90's, but at last the price has induced business, as between 7,000 and 8,000 gallons have been sold; 50/90's are quoted 7½d. There is little or nothing to be said about carbolic acids. Prices remain steady, and there is a fairly good demand. In naphthas solvent is a shade easier, but the change is hardly quotable. Creosote keeps very firm. Pitch is steady at 27s. 6d. f.o.b. East Coast, and 25s. West Coast.

Sulphate of ammonia has been moving fairly well, but the sudden improvement in the demand for prompt has sent prices up with a bound, so that £12. is now the quotation for London (outside makes), Hull and Leith; Beckton quotation having been withdrawn. For forward business is naturally more or less at a standstill, until the market is once more settled.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade there is a continued good inquiry for all the products, and prices are steady. For caustic soda, spot and forward delivery, quotations are f.o b. Liverpool:—77%, £7. 12s. 6d.; 74%, £7. 7s. 6d.; 70%, £7.; 60%, £6 per ton, 10 ton lots. Ammonia alkali, £3. 17s. 6d., bags, f.o.r. makers' works. Bicarbonate and crystals unchanged in price, and demand is good. Chlorates somewhat quiet, soda at 3¾d., and potash, 3½d. per lb. Bleaching powder is still in active request and price is firm, but without alteration, at £5. hardwoods, f.o.b., and softwoods, £4. 2s 6d., free on rails. Sulphate of copper firm at £26. 10s, f.o.b., for spot and early delivery. Sulphur, £4. 12s. 6d. per ton, f.o.r. Saltcake somewhat quieter and rather irregular at 27s. to 29s. per ton, in bulk, f o.r. For vitriol and muriatic acids there is a good general demand. Brown acetate of lime is steadier in price at £5. 2s. 6d. to £5 5s., ex-warehouse; English makes are somewhat lower. Grey acetate rather scarce and dearer at £8. 5s. per ton. Acetate of soda firm at 13s. per cwt. White sugar of lead, foreign, depressed at £23. 10s., f.o.b. Other lead, zinc, and tin salts are rather inclined to advance. In prussiate of potash and soda there is a distinctly firmer market. White powdered arsenic is in more limited supply, and best brands command £18. 15s to £19. per ton, with a rising tendency. Aniline oil and salt are unchanged in value and somewhat quiet. Carbolic acids of all qualities are only in moderate request. Ammonia salts generally are firm, but muriate irregular at £18. to £19. per ton. Borax dearer at £16. to £16. 10s. per ton. Nitrate of soda is rather easier for forward delivery at 7s. 7½d. to 7s. 9d. per cwt. On the whole, the demand for miscellaneous chemicals is not particularly active.

REPORT ON MANURE MATERIAL.

There is less activity in the market for mineral phosphates than was the case a few weeks ago, but buying of the highest grades continues on the Continent at still hardening prices.

The price reached for 77/80% Florida rock has had the effect of limiting U.K. purchases of this description. Tennessee rock offers freely for 1899 and 1900 shipment at 7¼d. to 7½d. per unit, delivered good U.K. ports. For Algerian and South Carolina rock the quotation is 6½d. per unit, and the quantity still available for 1899 shipment is becoming very small.

Common bones are in request at about £4. 10s. to £4. 12s. 6d. per ton. East Indian bone meal is somewhat dearer, the quotation being £5. 2s. 6d. to £5. 5s. per ton, according to quality, ex store Liverpool.

Nitrate of soda is a shade firmer on spot, 8s. per cwt. being now required for fine quality.

Home prepared dried blood offers at 10s. 9d. per unit, in doubles, delivered f.o.b. for prompt and forward delivery, but this is somewhat above the actual value in the forward position.

THE METAL MARKETS

LONDON, Wednesday.—Pig iron firm: Scotch Warrants closed at 62s. 9d., Middlesbrough, 54s. 6d., cash, and hematite, 62s. 10d. Copper steady: Chili bars, G.O B.'s and G.M.B.'s, closed at £76. 12s. 6d. to £76. 17s. 6d. cash, and nominal. Tin firm: Straits closed at £115. 15s. to £116. 5s. cash, and £116. 10s. to £117. three months; Australian, £116. 10s., English ingots, £119. to £119. 10s. Lead steady: Spanish, £14. 6s. 3d.; English, £14. 10s. Silesian spelter, ordinary, £28. 10s. Nickel, 1s. 2½d. Antimony, £39. 5s. Quicksilver: first hands, £8. 2s. 6d.; second hands, £8. 2s. *Copper Shares* steady: Cape, 4 15/16 to 4 11/16; Copiapo, 3¼ to 3⅜; Libiola, 2 to 2¼. Mason and Barry, 4¼ to 4⅜; Rio Tinto, 48⅝ to 48¾; Tharsis, 9⅛ to 9⅜.

GLASGOW, Wednesday.—Market easy and inactive. Scotch done at 62s. 9d. cash, and 62s 11½d. month; buyers, 62s. 9d. cash; sellers ½d. more. Cleveland done at 55s. month; buyers, 54s. 6d. cash; sellers, 55s. 7d. Cumberland hematite done at 63s. to 62s. 9d. cash, and 63s. 3d. to 63s. month; buyers, 62s. 9d. cash.

LIVERPOOL OIL AND COLOUR MARKET.

Wednesday.

OILS.—Palm oil is steady on spot, but rather quiet for arrival lots. Lagos has been done at £21. ex-quay, £21. 5s. transit, and £20. 15s. to arrive. Olive is in better demand, and steady, at £31. 10s. for Spanish, and £31. to £31. 10s. per tun for Candia. Linseed is well held at 19s. 6d. for Liverpool makes in export casks, the market closing firm. Cottonseed steady at 17s. to 17s. 6d. cwt. for Liverpool refined. Castor oil is only moving quietly at 2⅞d. for good seconds Calcutta, and 2¾d. for first pressure French. Tallow is unchanged as regards value, and the market remains steady. Resin is firm, holders being very steady in their ideas, while a good demand for spot prevails. Spirits of turpentine are in good request at 35s. 9d. cwt.

CAKES.—A rather firmer feeling prevails for American Western linseed on the spot, and with a slightly improved inquiry sellers are asking a shade more money, the quotation being now given at £5. 16s. 3d. to £6. 5s. Supplies of other imported descriptions continue on a limited scale, and the quotations are nominally repeated at £6. 10s. to £6. 15s. for River Plate, £7. 2s. 6d. to £7. 3s. 9d. for Bombay, and £7. 5s. to £7. 7s. 6d. per ton for Russian. A further decline of 5s. has taken place in values of Liverpool brands, but even now consumers purchase to only a very moderate extent, though sellers offer at £7. 5s. to £8. 5s. per ton, according to brand. There is not much passing in good to choice brands of American decorticated cottonseed, but a rather firmer tone prevails, and the quotation is now given at £5. 12s. 6d. to £6. per ton, according to brand. Liverpool decorticated makes remain steady, but without much inquiry experienced at £6. 5s. to £6. 10s., according to brand, and with a firm tone in the market for undecorticated makes the value is maintained at £4. 15s. to £5. 5s. per ton, according to brand. Rather more inquiry is experienced for Egyptian on the spot, and the tone is slightly steadier, with sellers asking £4. 8s. 9d. per ton.

COLOURS.—Prices are steady, and practically without change. Ochres: Oxfordshire—common £10., medium £12., best £15.; Derbyshire—common 40s., medium 50s., best 60s.; Welsh—best 91s. seconds 50s., and common 18s.; Devonshire, 40s. to 45s.; French, J C, 65s. Umber: 40s. to 45s. White lead: £16 Red lead unchanged. Venetian red: £6. to £10. Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7., medium, £10.; finest, £20.; Zinc oxide: £22. 10s. to £25.

HULL PAINT, OIL, AND COLOUR REPORT.

Tuesday.

OILS.—The markets here for linseed and cottonseed oils are a shade better than prices recorded a week ago. The Norwegian market for linseed oil appears to be completely closed to the producer here, owing to the exorbitant tariffs recently imposed. This market at one time was the very best, and the wonder is where markets are so soon found to replace such; to individual firms who have spent years cultivating them it must mean a serious dislocation of business. The stocks of seed in Hull for the month ending April were: Linseed, 8,877 qrs against March 7,928; rapeseed, 4,785 qrs. against 7,680 qrs.; cottonseed, 1,652 tons against 1,450 tons; whilst the imports for the month have been:—Linseed, 62,897 qrs. against 44,798 qrs. ending March; rapeseed, 1,589 qrs. against 18,430 qrs.; cottonseed, 11,471 tons against 19,358 tons. Linseed oil is firm, being quoted 17s. 6d., spot, naked; 17s. 3d. month; 17s. June/August; 16s. 3d. last four months; boiled and refined, £1. to £1. 10s. per ton extra. Refined cottonseed oil, 15s. 6d. spot, and to August; crude, 14s. 3d. spot, whereat there are buyers to August; casks, £1., and barrels, £1. 10s. per ton extra. Olive oil from £31. 10s. (for Candia) to £33. per tun. Colza oil, 23s. 6d. to 24s. 6d. for Stettin. Olive oil soap, £15s. 10s. per ton. Sulphur oil, 20s. Castor oil, extracted here, cold drawn, 27s. 3d. in barrels; 3¼d. per lb. in cases; first pressure, 24s. 9d.; in cases, 2 1/16d. per lb.; second pressure, 23s. 9d. per cwt. in barrels; in cases, 2⅛d. per lb.; French castor oil, first pressure, 26s. in barrels; Cod oil, £16. to £18. per ton. Oleines unchanged, from £18. 10s. to £21. Resins unchanged.

CAKES.—Feeding stuffs in less demand, yet prices are firm owing to limited supplies of seed for prompt delivery, many of the mills being stopped for supplies. Linseed cakes firm but demand quiet; 95% pure, £7. 2s. 6d. to £7. 5s. per ton. Oilcakes (linseed), £6. 5s. to £6. 7s. 6d. Russians, £6. 12s. 6d. to £7. 2s. 6d. Cotton cakes very firm, best makes, £5. 2s. 6d.; seconds, £4. 17s. 6d. to £5; decorticated, £6. 5s.; meal, £5. 17s. 6d. to £6. Rape cakes, Black Sea, £4. per ton.

PAINTS.—In fair demand; prices unchanged, Ordinary colours, in oil, from £10. per ton; ready mixed, in tins, from £24.; dry colours from £4. upwards; black varnish, £5. 15s. per ton.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, Tuesday.

The general market holds to the bettering movement of late experienced, and prices for the most part are firm of figure, if not actually advanced. Movement is more active, and there is a greater bulk of orders for shipping destinations, but mostly in the heavier lines. Bleaching powder, soda crystals, and soda ash are all very steady at the old quotations. Sulphur is still scarce and dear. Sulphate of copper has gained a further fraction. Sulphate of ammonia is scarce and rising. On Saturday £12., spot, f.o.b. Leith, was paid. Forward buying has been checked by the strong running of the article, and sellers' views are very high. Burning oils, lubricating oils, solid paraffins, and paraffin spirit are all steady at the old prices. Two more of the Mineral Oil Companies have declared working results for the past year. One of them shows an improvement, and has 5 per cent. for the ordinary shareholders. The other comes out once more with a positive loss.

Chief prices current are:—Soda crystals, £2. 5s. to £2. 7s. 6d. basis nett, Tyne; soda ash, £4. 2s. 6d. to £4. 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 5s. to £4. 15s. nett, Glasgow; caustic soda, white, 74° £7. 7s. 6d., 70/72° £7., 60/62° £6., and cream 60/62° £6., all nett, Liverpool; bleaching powder, 35/37°, £5. 5s. to £5. 10s. nett, Tyne; saltcake, 28s.; borax, English refined, £16., and boracic acid, £26. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s. nett, Liverpool; bichromate of potash, 3½d., less 6% for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d., less 6% for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow); chlorate of potash, 3⅝d., less 5% Liverpool; nitrate of soda, 8s. 3d.; sulphate of ammonia, £12., prompt, f.o.b. Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £26. 10s., less 5% Liverpool; paraffin scale, hard, 1⅞d. to 2d. per lb., and soft 2d. per lb.; paraffin wax, 120° semi-refined, 2¼d. to 2½d. per lb.; paraffin spirit (naphtha), 9d. to 9½d. per gal; paraffin oil (burning), No. 1, 6¼d.; and crystal, 6¾d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 15s. to £5. 5s., 885° £5. 10s. to £6., and 890/895° £6. 5s. to £6. 10s. Week's imports of sugar at Greenock were 10,500 bags, beet, unrefined.

TYNE CHEMICAL REPORT.

TUESDAY.

Chemicals continue in only moderate demand and show no change in prices. Caustic soda, 70%, is quoted at £7. per ton, and 76/77% £8. per ton. Bleaching powder £5. 10s. per ton. Soda crystals £2. 12s. 6d. per ton, gross weight, locally.

Bleaching powder, softs, £5. 10s. per ton, nett; do., hards, £5. 15s. per ton, nett; caustic soda: 76/77% £8., and 70% £7. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48% £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do, 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75°Tw., £2. 12s. 6d. per ton, nett; do., 100°Tw., £3. per ton, nett; do., 140°Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. 0d. per ton, nett; blanc fixe, £6. 10s. per ton nett; chloride of barium, refined crystals, £6. 15s. 0d. per ton, nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt is steady at 9s.6d. per ton, f.o.b. Tees.

COALS.—Trade is very firm, and market active and collieries well employed. Household coals are somewhat duller. Coke very firm, and for best Durham qualities the quotation is 25s. per ton. Best Northumbrian steam, 13s. 6d. to 14s. per ton; second qualities, 12s. 6d. to 13s. per ton; small steam, 7s. 6d. to 8s. per ton; bunker coals, 10s. to 10s. 6d. per ton; gas coals, 10s. 6d. to 11s. per ton; household coals, 10s. to 11s. per ton; coke, 24s. to 25s. per ton.

New Companies.

F. T. Burgess, Ltd.—CAPITAL £10,000., in £1. shares. This company has been formed to acquire and carry on the business of a mine owner, ochre, oxide, colour, paint, and varnish manufacturer, and oil refiner and merchant, carried on by F. T. Burgess. The first directors are F. T. Burgess and C. E. Lucas; qualification, 1,000 shares; remuneration as fixed by the company.

Acetylene Manufacturing Company, of Birmingham, Ltd.—CAPITAL £3,000., in £1. shares. This company has been formed to adopt an agreement with G. Marshall, H. Killby, P. S. Farey, F. Sunderland, R. H. Sunderland, and F. H. Carvell, and to acquire, own, and work any patents and rights connected with the manufacture of carbide of calcium and acetylene gas. Registered without articles of association by J. Westcott, 140, Strand, W.C.

Baku (Zabrat) Petroleum Company, Ltd.—CAPITAL £50,000, in £1. shares. This company has been formed to acquire any petroleum or oil-bearing lands in Russia or elsewhere, and to deal in and refine petroleum and other mineral oils and the products thereof. The subscribers to the memorandum of association are:—H. Spinks, 59, Church-street, Homerton, N.E., clerk; J. A. Fuller, 50, Chatterton-road, Finsbury Park, N., secretary; J. M. Lickfold, 33, Brunswick-square, W.C, journalist; G. Wallace, 27, Ayliffe-street, S.E., gentleman; A. D. Brown, 31, Reighton-road, Upper Clapton, writer; A. J. Swan, 32, Melbourne Grove, E. Dulwich, S.E., gentleman; A. Woollard, 17, Paget-road, Stoke Newington, accountant.

Assam Oil Company, Ltd.—CAPITAL £310,000., in £1. shares. This company has been formed to adopt an agreement with the Assam Railways and Trading Company, Ltd., to acquire any petroleum or oil-bearing lands in Assam or elsewhere, and to deal in and refine petroleum and other mineral oils and the products thereof. The subscribers to the memorandum of association are:—A. J. W. Lawson, 43, Forest Drive West, Leytonstone, secretary; W. E. C. Baynes, 1, Bell-yard, Temple Bar, gentleman; H. W. Brown, 59, Mackenzie-road, Beckenham, journalist; J. A. Fuller, 50, Chatterton-road, Finsbury Park, N., secretary; J. W. Pollard, 28, Mehetabel-road, Hackney, N.E., gentleman; D. J. Prosser, 12, Matham Grove, E., Dulwich, S.E., clerk; J. M. Lickfold, 33, Brunswick-square, W.C., journalist.

Penzance Fish Guano and Oil Company, Ltd.—CAPITAL £16,000., in £1. shares. This company has been formed to adopt an agreement with the South Coast Guano Company, Ltd., and to carry on the business of manufacturers of chemicals, chemical and other manures, etc., driers of blood and other matter, tallow melters, soap makers, bone boilers, etc. The subscribers to the memorandum of association are:—T. Borrodaile, Nya Ghur, Surbiton, gentleman; J. O. Borrodaile, 2, Gleneagle-road, Streatham, gentleman; E. R. S. Skeels, 36, Essex-street, Strand, W.C., solicitor; E. S. Skeels, 95, Holland-road, W., gentleman; A. Dick, 7, Union-court, E.C., accountant; H. C. Friend, 1, Fenchurch-street, E.C, fertiliser broker; A. Steward, 7, Union-court, E.C., secretary.

Anglo-Galician Oil Company, Ltd.—CAPITAL £560,000., in £1. shares. This company has been formed to adopt an agreement with the Oil Fields of Galicia Contract Company, Ltd., to acquire their refining factory and certain oil-bearing lands in Austria-Hungary, and to deal in and refine petroleum and other mineral oils and the products thereof. The subscribers to the memorandum of association are:—E. H. Knights, Cromwell-avenue, Cheshunt, writer; L. G. Oldfield, Hawthorn Lodge, Sevenoaks, chartered accountant; F. Blackshaw, 24, Hartland-road, Kilburn, secretary; J. Miller, 26, Oldhill-street, Stamford Hill, N., accountant; F. M. Barrington, South View, Orford-road, Walthamstow, accountant; D. J. Taylor, 12, Donnington Park-road, W., Hampstead, registrar; J. Fisher, 94, Hillfield-avenue, Harold-road, N, accountant.

Carpathian Oil, Ltd.—CAPITAL £800,000., in £1. shares. This company has been formed to adopt an agreement with the Prahova Oil Association, Ltd., to acquire any petroleum or oil-bearing lands in Roumania, Hungary, or elsewhere, and to deal in and refine petroleum and other mineral oils and the products thereof. The subscribers to the memorandum of association are:—W. H. Hickman, 103, Algernon-road, Lewisham, S.E., clerk; A. R. Warner, 20, Rebecca-terrace, Gomm-road, S.E., clerk; J. M. Lickfold, 33, Brunswick-square, W.C., journalist; E. Wyatt, Bangor House, Lausanne-road, Hornsey, gentleman; G. Wallace, 27, Ayliffe-street, S.E., gentleman; H. F. Garrett, 54, Gloucester-street, Bloomsbury, W.C, secretary; E. T. Church, 34, Geneva-road, Brixton, S.W., gentleman.

IMPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending April 29th.

Acetate of Lime—

U. States,	427 pks.	Lister & Biggs

Acetic Acid—

Holland,	113 pks.	Little & Johnston
,,	50	R. W. Greeff & Co.
,,	272	A. & M. Zimmermann
Germany,	10	H. Lorenz

Acetone—

Germany,	10 pks.	T. H. Lee
France,	6	E. Catlin
Austria,	34 dms.	Thames S. T. & L. Co., Ld.

Alkali—

France,	156 c.	J. Harrison

Alum—

Holland,	125 pks.	J. White

Alumite—

Sydney.	£2,370	A. B. Curtis & Co.

Ammonium Phosphate—

Holland,	£45	Chemical Works

Antimony Ore—

Turkey,	35 t.	Hallett & Fry
Australia,	18	James & Shakespere
,,	5	H. Bath & Son
,,	5	J. J. Pratt & Sons
Japan,	40	R. H. Annison
E. Indies,	35	R. & J. Henderson

Antimony Sulphide—

France,	£100	Petri Brs.

Arsenic—

Portugal,	119 pks.	Coverley & Westray

Barium Chloride—

Holland,	22 pks.	Petri Brs.

Barium Sulphate—

Belgium,	73 pks.	J. L. Lyon & Co.
Germany,	48	,,
France,	5	Burnett Brs. & Sons

Barytes—

Germany,	200 pks.	Burrell & Co.
Holland,	32	Hernu, Peron & Co.
Belgium,	250	Capes & Self
Holland,	57	W. Harrison & Co.
Germany,	79	,,
Belgium,	44	,,
,,	18	J. L. Lyon & Co.
Holland,	32	F. Claydon & Co.

Basic Slag—

Belgium,	150 t.	Chemical Works

Bleaching Powder—

Holland,	45 pks.	J. M. Steel & Co.
France,	54	,,

Bones—

Melbourne,	15 t.	Culverwell, Brooks & Co.
N. Zealand,	2	,,
Melbourne,	9	C. M. Lampson & Co.

Bromide of Iron—

Germany,	10 pks.	A. & M. Zimmermann

Caoutchouc—

E. Indies,	60 c.	H. Devitt & Co.
France,	11	H. Johnson & Sons
,,	160	W. Balchin, Ld.
E. Indies,	9	W. M. Smith & Sons
France,	42	Girard Brs. & Co.
U. States,	15	Lewis & Peat
Germany,	4	L. & I. D. Jt. Co.
U. States,	9	,,
Straits,	77	,,
Zanzibar,	36	,,
,,	24	Hale & Son
Straits,	303	W. Pope & Co.
,,	585	E. Boustead & Co.

Castor Oil—

Italy,	33 cs.	J. Knill & Co.
,,	3	G. S. & N. Co.
E. Indies,	30	Perkins & Homer
,,	15 cks.	J. Owen
,,	90	Cayzer, Irvine & Co.
France,	10 brls.	F. Boehm

Caustic Potash—

France,	5 t.	F. W. Berk & Co., Ld.
Germany,	11 18 c.	J. M. Steel
	50 dms. 20 cks.	& Co.
France,	20 20 pks.	W. E. Cole

Chemicals (*otherwise undescribed*)

Belgium,	£7	M. H. Voss & Co.
Sweden,	10	M. D. Co.
U. States,	36	R. Thompson
,,	440	B. & F. Wf. Co., Ld.
Germany,	735	L. & I. D. Jt. Co.
,,	8	Pickford & Co.
,,	62	Argo S. S. Co.
Denmark,	60	Crosse & Blackwell, Ld.
Holland,	140	H. Harkness
Belgium,	60	A. Hughes
N. Zealand,	85	H. Hill & Sons
Melbourne,	730	,,
Belgium,	350	T. H. Lee
Holland,	46	,,
Germany,	7	Craven & Co.
,,	7	Butler's Wf., Ld.

,,	20	F. W. Berk & Co. Ld.
,,	738	A. & M. Zimmermann
Belgium,	310	T. Ronaldson & Co.
,,	110	John Cockerill Line
Germany,	50	R. W. Greeff & Co.
,,	282	H. Lambert & Co.
U. States,	956	S. C. Jones
,,	90	H. Lambert & Co.
Holland,	10	Hernu Peron & Co.
,,	7	M. Benscher
,,	62	Phillipps & Graves

Coal Products—

Pitch

N. Russia,	100 brls.	H. Johnson & Sons

Tar

U. States,	500 brls.	Elkan & Co.

Copper Oxide—

Germany,	3 pks.	H. Lambert

Copper Sulphate—

Hg. Kong,	168 pks.	Elkan & Co.

Cream of Tartar—

Holland,	20 pks.	Kirkpatrick, Barr & Co.
France,	4	B. & F. Wf. Co., Ld.
,,	10	T. Trapp & Sons
,,	5	M. Ashby, Ld.
,,	5	F. C. Devon & Co.
,,	15	W. C. Bacon & Co.

Dyestuffs—

Argols

Spain,	39 pks.	Thames S. T. & L. Co., Ld.
Italy,	37	,,
,,	402	B. Jacob & Sons

Cutch

Straits,	300 pks.	Borneo Co.

Extracts

France,	200 pks.	Netherlands S. B. Co.
U. States,	50 pks.	W. Burton & Sons
France,	1	,,
,,	25	L. J. Levinstein & Sons
,,	15	B. & F. Wf. Co., Ld.
Denmark,	2	Sorensen & Co.
,,	1	Tegner, Price & Co.

Gambier

Straits,	888 pks.	Brinkmann & Co.
,,	228	S. Figgis & Co.
,,	2,001	Adamson, Gilfillan & Co.
,,	613	Beresford & Co.
,,	1,502	Leach & Co.
,,	550	E. Boustead & Co.

Indigo

E. Indies,	15 chts.	L. & I. D. Jt. Co.
,,	6	Parsons & Keith
,,	10	Croysdale & Co.
,,	10	Park Macfadyen & Co.
,,	16	Parry & Co.
,,	20	Stutz & Co.
,,	15	R. Von Glehn & Sons
,,	13	H. J. Perlbach & Co.
,,	44	J. Owen
,,	40	L. & I. D. Jt. Co.
,,	20	Kaltenbach & Schmitz
,,	11	Arbuthnot, Latham & Co.
,,	88 pks.	J. W. Cook & Co., Ld.
Spain,	35	Marine Insurance Co.
,,	52	Alzamora Brs.
,,	3 srns.	Balois Insurance Co.
E. Indies,	20 chts.	J. Karpeles & Co
,,	9	Wallace Bros.
Holland,	2	J. Barber & Co.
Belgium,	2 cs.	John Cockerill Line

Myrabolams

E. Indies,	1,357 pks.	W. Shelcott & Sons
,,	1,366	F. Claydon & Co.
,,	2,194	L. & I. D. Jt. Co.
,,	4,000 pokts	P. & O. Co

Orchella

E. Indies,	3 pks.	A. Everingham & Co.

Saffron

Spain,	1 pk.	Major & Field

Shumac

Italy,	350 pks.	Beresford & Co.
,,	150	H. K. Dawson
,,	668	J. W. Cook & Co., Ld.
,,	68	R. Waters
,,	150	J. E. Scott
,,	500	Bailey & Leetham, Ld.

Tanners' Bark

Natal,	38 t.	Flack, Chandler & Co.
,,	25	Boutcher, Mortimore & Co.
,,	93	J. T. Rennie, Son & Co.
Adelaide,	51	H. Devitt & Co.
Natal,	16	A. & W. Nesbitt
Cape,	1	L. & I. D. Jt. Co.
U. States,	7 t.	Goad, Rigg & Co.

Tumeric

Cochin,	570 bgs	J. P. Alpe & Co.
E. Indies,	8 pks	,,
Cochin,	152	H. J. Perlbach & Co.
,,	69	Dalton & Young
,,	60	H. Devitt & Co.

Valonia

A. Turkey,	28 t.	Prop. Fenning's Wf.
,,	309	A. & W. Nesbitt
,,	55	Anning & Cobb
,,	25	H. Smith
Italy,	10	A. Laming & Co.

Farina—

Germany	100 pks.	G. Hornzee
,,	25	J. Barber & Co.
France,	140 pks.	J. W. Cook & Co., Ld.
,,	7	Rosenberg, Loewe & Co.
Germany,	50	J. Knill & Co.
,,	100	Dunlop Brs. & Co.
Italy,	200	Nichs. Wvs., Ld.
Holland,	50	Ohlenschlager Brs.

Glucose—

U. States,	550 pks.	2,250 c.	R. G. Hall & Co.
,,	525	665	G. Clarke & Son
,,	100	623	L. & Til. L. C. & D Co.
Germany,	100	100	Pickford & Co.

Glue—

Germany,	£700	H. Lambert
,,	15	L. & I. D. Jt. Co.
,,	15	Mack & Co.
France,	75	Burnett Brs. & Sons
Germany,	61	M. Dk. Co.
,,	14	Argo S. S. Co.
Holland,	9	A. G. Robinson & Co.
Norway,	330	C. A. Nichols
,,	70	O. Schmidt & Co.
Austria,	215	Steinhoff, Sons & Co.
France,	916	T. M. Duche & Sons
Belgium,	340	Leach & Co.
,,	795	G. E. Banes
France,	54	Mory & Co

Glycerine—

France,	£50	J. L. Lyon & Co.
,,	440	Soundy & Sons
Holland,	110	Phillips & Graves
,,	220	J. Barber & Co.

Guano—

Peru,	1,960 t.	A. Hunter & Co.

Gutta Percha—

Straits,	5 t.		Huttenbach & Co.
,,	14	1 c.	Kleinwort, Sons, & Co., Ld.
,,	22	10	H. W. Jewsbury & Co.
Holland,	6	12	J. Peet & Co.
,,	2		Anderson, Weber, & Smith
,,	4	5	Prop. Bull Wf.

Iron Oxide—

Austria,	2 pks.	O'Hara & Hoare

Lead Acetate—

Germany,	£110	R. W. Greeff & Co.

Manure—

Germany,	150 t.	F. W. Berk & Co., Ld.
,,	30	Perkins & Homer
E. Indies,	100	A. Hunter & Co.

Methyl Alcohol—

Austria,	23 dms.	T. Jones & Co.

Molasses—

France,	200 cks.	1,050 c.	Simons & Co.
U. States,	500	3,052	Union L. Co., Ld.
,,	200	1,233	Deering & Robottom
,,	100	546	W. & W. H. Stead
,,	400	2,166	W. Measday
,,	3,311	20,450	J. R. Francis & Co.
,,	459	2,504	J. Forsey
Kingston,	600	3,252	Deering & Robottom

Ochre—

France,	30 pks.	Vokins & Co., Ld.
,,	208	W. Harrison & Co.
Holland,	4	Phillipps & Graves
Spain,	50	Vokins & Co., Ld.
Italy,	11	T. & W. Farmiloe, Ld.
Germany,	4	H. Keller

Paraffin Wax—

U. States,	100 cs.	Anglo-American Oil Co.
,,	256 brls.	L. & I. D. Jt. Co.

Phosphates—

France,	300 t.	W. E. Cole
Belgium,	235	West & Penrose
,,	20	J. E. Kitton

Potash—

Germany,	13 pks.	L. & I. D. Jt. Co.

Potassium Carbonate—

Belgium,	5 t.	F. Smith
France,	5	Petri Brs.
,,	11	W. E. Cole
,,	3 5 c.	J. A. Reid

Potassium Muriate—

Germany,	508 bgs.	Anglo-Contl. Guano Works

Potassium Oxalate—

Holland,	£35	R. W. Greeff & Co.

Potassium Permanganate—

Holland,	20 pks.	R. W. Greeff & Co.

Potassium Sulphate—

Germany,	500 bgs.	Anglo-Contl. Guano Works

Pyrites—

Spain,	71 t. 8 c.	Anderson, Anderson, & Co.
,,	2,061	C. Tennant, Sons, & Co.
,,	2,866	Naylor, Benzon, & Co.

Red Lead—

Holland,	18 pks.	J. Owen
Germany,	25	Blundell, Spence, & Co.
,,	3	H. Lambert
,,	38	Taylor Brs.

Rosin—

U. States,	266 brls.	F. & S. Chiesman & Co.
,,	11,510	Fairclough, Dodd, & Sons

Salicylic Acid—

Germany,	21 pks.	Butler's Wf., Ld.

Saltpetre—

Germany,	113 cks	P. Hecker & Co.
,,	100 bgs.	S. E. Railway Co.
E. Indies,	240	Lucas & Spencer's Wf.

Soda—

Austria,	12 t. 15 c.	J. Norrenberg & Co.

Soda Ash—

Holland,	96 t.	R. Waters

Sodium Nitrate—

Chile,	21,177 bgs.	W. Montgomery & Co.

Sodium Prussiate—

France,	15 pks.	J. Owen
Belgium,	34	,,

Starch—

Holland,	524 pks.	Little & Johnston
,,	48	G. S. N. Co.
,,	36	J. Barber & Co.
Belgium,	40	,,
,,	443	T. H. Lee
,,	40	F. Claydon & Co.
,,	100	Taylor Brs.
,,	181	Leach & Co.
,,	440	E. & T. Pink
,,	120	J. Harrison
,,	160	C. Tennant, Sons, & Co.
U. States,	1,690	,,
,,	700	Beck & Pollitzer
,,	1,600	Union Ltge. Co., Ld.
France,	260	W. E. Cole
,,	180	F. Claydon & Co.

Stearine—

Holland,	51 bls.	J. Owen
,,	68 bgs.	H. Hill & Sons
France,	133	,,
Belgium,	276	,,
,,	12 cks.	,,
,,	80 bgs.	J. Baker
Germany,	5 cks.	Craven & Co.

Sulphur—

Italy,	5 t.	Soundy & Sons
,,	25	A. Zumbeck & Co.
,,	32	A. B. Curtis & Co.
,,	34	G. Boor & Co.
,,	10	F. C. Devon & Co.
,,	10	F. Smith

Tallow—

Melbourne,	119 cks.	Mordaunt Brs.
,,	300	Goad, Rigg, & Co.
,,	389	Elkan & Co.
,,	1,141	Phillipps & Graves
,,	75	Flack, Chandler, & Co.
,,	50 pks.	H. Lambert
,,	100	,,
,,	7 cks.	,,
,,	25	Beresford & Co.
Sydney,	133	A. B. Curtis & Co.
,,	12	H. Devitt & Co.
,,	5	Beresford & Co.
,,	30	Mordaunt Brs.
,,	70	Bessler, Waechter, & Co.
,,	100	Lucas & Spencer's Wf.
,,	387	G. S. Yuill & Co.
,,	100	Union Ltge. Co., Ld.
,,	140	L. & I. D. Jt. Co.
,,	221	Hoare, Wilson, & Co.
,,	29	Culverwell, Brooks, & Co.
,,	243	J. R. Francis & Co.
,,	1,931	Phillipps & Graves
,,	106	J. W. Cook & Co., Ld.
N. Zealand,	26	B. Young & Co.
,,	16	Flack, Chandler, & Co.
,,	100	J. Owen
,,	50	Dalgety & Co., Ld.
,,	35	Goad, Rigg, & Co.
,,	1,037	Phillipps & Graves
,,	81	Mordaunt Brs.
,,	14	Lucas & Spencer's Wf.
,,	19	J. Groves
,,	77	Deering & Robottom
,,	115	N. Z. L. & M. A. Co.
France,	10	C. S. Lovell
Straits,	1,382 pks.	J. W. Cook & Co., Ld.
China,	1,440	Kumpf & Eckenstein
U. States,	215 trcs.	W. Balchin, Ld.
Sweden,	100 bgs.	W. E. Bott & Co.

Tartar—

Italy,	20 pks.	Howards & Sons
,,	16	Thames S. T. & L. Co., Ld.
,,	57	B. Jacob & Sons

Tartaric Acid—

Holland,	18 pks.	Kirkpatrick, Barr, & Co.
France,	10	B. & F. Wf. Co., Ld.

Ultramarine—

Holland,	7 pks.	Taylor Brs.
,,	1	J. Barber & Co.
Belgium,	9	W. Harrison & Co.

Varnish—

U. States,	30 pks	Lunham & Moore

Verdigris—

France,	1 pk.	B. & F. Wf. Co., Ld.

Waste Salt—

Germany,	25 t.	F. W. Berk & Co., Ld.

White Lead—

Holland,	49 pks	T. & W. Farmiloe, Ld.
,,	40	Burrell & Co.
,,	60	Perkins & Homer
,,	50	T. Planer
,,	20	J. R. Francis & Co.
,,	72	Randall Brs.
,,	20	Kerestedji & Co.
,,	44	M. Ashby, Ld.
Belgium,	38	T. & W. Farmiloe, Ld.
,,	69	J. L. Lyon & Co.
Germany,	50	Taylor Brs.
,,	24	Wilkinson, Heywood & Co.
,,	25	Burrell & Co.
,,	27	W. A. Rose & Co.
,,	5	H. Lambert

Wolfram Ore—

E. Indies,	6 t.	E. Boustead & Co.

Wood Pulp—

Sweden,	1,260 pks.	W. G. Taylor & Co., Ld.
,,	500	Tough & Henderson
Germany,	205	Henderson, Craig, & Co.
,,	612	E. J. & W. Goldsmith
France,	250	Robinson, Roberts & Co.
Belgium,	1,992	J. Harrison

Zinc Oxide—

Germany,	500 pks.	Soundy & Sons
,,	15	Prprs. Dowgate Dk.
,,	13	Petri Brs.
Holland,	50	J. Matton
,,	40	M. Ashby, Ld.
U. States,	650	,,

Zinc White—

Holland,	100 pks.	Spies Brs. & Co.
,,	4	J. Barber & Co.

LIVERPOOL.

Week ending April 27th.

Acetic Acid—

Antwerp,	5 crbys.	

Aluminium—

New York,	19 cs.	T. Ashbury

Ammonia—

Boston,	100 cylds.	J. Simpson & Co.
Antwerp,	10 cs.	

Barytes—
Antwerp, 63 cks. 318 bgs.
Rotterdam, 1
Bone Ash—
Antwerp, 593 bgs.
Bones—
Alexandria, 545 bgs.
Smyrna. 2,347
Boracic Acid—
Leghorn, 104 cks.
Borax—
Rotterdam, 40 cks.
Caoutchouc—
Havre. 26 cks. 123 cs.
Chemicals *(otherwise undescribed)*
Hamburg, 2 cs.
Chrome Ore—
Smyrna, 1,650 t. Bourman & Co., Ld.
Coal Products—
Pitch
Hamburg, 30 cks.
Zante, 1
Cobalt—
Rouen, 5 cs. Co-op. W'sale Society, Ld.
Colours—
Antwerp, 3 cks.
Hamburg, 54 cs.
Rotterdam 4 11 tubs
Cottonseed Oil—
Boston, 52 brls.
Cream of Tartar—
Bordeaux. 33 cks.
Dyestuffs—
Argols
Patras, 9 brls. L. A. Acratopula
Cutch
Rangoon, 355 bxs.
Dyewood
Philadelphia, 40 brls.
Extract
New York, 50 brls.
Genoa, 10 cks.
Fiume, 426
Dunkirk, 25
Rouen, Co-op. W'sale Society, Ld.
Bordeaux, 100
Baltimore, 25 brls. McArthur & Co.
Indigo
Karachi, 78 cs
Myrabolams
Bombay, 670 bgs. D. Balerusbua & Co.
" 220 Aldridge, Salmon & Co.
" 2 582
Shumac
Palermo, 500 bgs. 25 bls.
Turmeric
Bombay, 137 bgs.
Valonia
Dregomestro, 1,734 bgs.
Smyrna, 3,582 170 t.
Marathouse, 2,263
Patras, 2,509
Syra, 180 G. C. Cozzifachi
Smyrna, 470 ktls. G. Esay & Co.
Dyewood Extract—
New York, 200 brls. McArthur & Co.
Farina—
Newfairwater, 250 bgs.
Glucose—
New York, 100 brls.
Glue—
Antwerp, 16 bgs. J. T. Fletcher & Co.
Hamburg, 70
Rotterdam, 140
Rouen, 8 cks.
Antwerp, 6
Manure—
Bombay, 1,000 bgs. W. & R. Graham & Co.
Karachi, 3,500 "
" 1,000 Kalli Brs.
Mica (Pulp)—
New York, 10 brls. House & Co., Ld.
Ochre—
Rouen, 24 cks. Co-op W'sale Society, Ld.
Paraffin Wax—
New York, 60 brls. Anglo-Am. Oil Co.
Rangoon, 800 bxs. 154 bgs.
New York, 1,680 brls. Thompson & Bedford
Phosphates—
Ghent, 1,000 bgs.
Potash—
Rouen, 90 cks. Co-op. W'sale Society, Ld.
Hamburg, 4
Potassium Carbonate—
Newfairwater, 19 cks. Sachse & Klemm
" 10 Bancroft & Co.
Quebracho Extract—
Antwerp, 10 brls.
Red Lead—
Rotterdam, 7 cks,
Rosin—
Ceara, 407 bgs. R. Singlehurst & Co.
Saltpetre—
Calcutta, 480 bgs. King, Baillie & Co.
" 478
Soap—
Antwerp, 1 cs.
Smyrna, 425 bxs. 1
New York, 4 cs. Colgate & Co.
N. Orleans, 1,391 brls.
New York, 535
Rotterdam, 3 cs.
Bordeaux, 100 bgs. Geo. G. Blackwell, Sons & Co.
New York, 5 cs. Bibby Brs. & Co.
" 100 bxs. A. Booth & Co.
410 cs.
Sodium Nitrate—
Taltal, 2,240 t.
Sodium Silicate—
Hamburg, 1 cs.
Starch—
Antwerp, 320 cs.
Stearine—
Rouen, 58 bgs. Co-op. W'sale Society, Ld.
Sulphur—
Catania, 100 bgs. Elder, Dempster & Co.
" 370
Tallow—
New York, 200 tcs.
N. Orleans, 150
New York, 150 Colby & Co.
Boston, 125 250 brls.
Tartaric Acid—
Messina, 8 cks.
Turpentine—
Havre, 2 cs.
Antwerp, 10 brls.
Libau. 3 cks.
Ultramarine—
Hamburg, 1 ck. 3 cs.
Rotterdam, 20
Varnish—
New York, 9 brls. Davies, Turner & Co.
Rotterdam, 3 cks.
White Lead—
Rotterdam, 112 cks.
Wood Pulp—
Halifax, 2,176 bls. Becker & Co.
Rotterdam, 219
St. John, N.B., 933
Portland, M., 1,349
Zinc Oxide
Antwerp, 78 brls.
Zinc White—
Rotterdam, 120 cks.

MANCHESTER.

Week ending April 29th.

Alum—
Rotterdam, 1 ck.
Antimony Salt—
Rotterdam, 11 cs.
Barium Chloride—
Rotterdam, 20 cks.
Barytes—
Antwerp, 140 bgs. 20 pks.
Calcium Carbide—
Gothenburg, 2 dms.
Caustic Potash—
Antwerp, 20 dms.
Chemicals *(otherwise undescribed)*
Rotterdam, 1 ck. 3 cs. 6 brls.
Chrome Acid—
Rotterdam, 1 ck.
Coal Products—
Alizarine
Rotterdam, 88 cks. 2 cs.
Pitch
Rotterdam, 12 cks.
Colours—
Antwerp, 4 cks.
Rotterdam, 44 – 39 cs. 20 bls. 95 brls.
Dextrine—
St. John, N.B., 200 bgs.
Dyestuffs—
Extracts
Antwerp, 6 brls.
Rotterdam, 9 cks.
Indigo
Rotterdam, 9 chts.
Tannin
Rotterdam, 4 cks.
Farina—
Hamburg, 30 bgs.
Rotterdam, 100
Glucose—
Newport News, 850 brls.
St. John, N.B., 1,210
Glue—
Antwerp, 17 pks.
Rotterdam, 120 bgs.
Potassium Prussiate—
Antwerp, 5 brls.
Salammoniac—
Antwerp, 5 brls.
Rotterdam, 8 cs.
Soap—
Hamburg, 2 cs.
Starch—
Antwerp, 138 cs.
Newport News, 2,400 bgs. 700 sks.
Rotterdam, 230
St. John, N.B., 7,100
Stearine—
Rotterdam. 13 bls.
Tartaric Acid—
Rotterdam, 8 cks.
Ultramarine—
Hamburg, 2 cs.
White Lead—
Antwerp, 12 cks.
Wood Pulp—
Christiania, 250 bls.
Drammen, 3,189 Felber, Jucker, & Co.
Gothenburg, 1,466
Halifax, N.S., 10,149 8,500 bdls.
Hamburg, 200
St. John N.B., 2,468
Zinc Oxide—
Antwerp, 15 cks.
Rotterdam, 20 brls.

HULL.

Week ending April 29th.

Acids—
Bari, 6 cks. Wilson, Sons, & Co., Ld.
Ammonium Oxalate—
Rotterdam, 2 cks. Hull & Netherlands S. S. Co.
Barytes—
Amsterdam, 93 cks. Hull & Netherlands S. S. Co.
Antwerp, 56 brls. Wilson, Sons, & Co., Ld.
Rotterdam, 62 bgs. Hull & Netherlands S. S. Co
Caoutchouc—
Rotterdam, 60 bls. Wilson, Sons, & Co., Ld.
Castor Oil—
Antwerp, 28 brls. Wilson, Sons, & Co., Ld.
Chemicals *(otherwise undescribed)*
Antwerp, 74 pks. Wilson, Sons, & Co., Ld.
" 3 cks.
New York, 254 bgs. "
Rouen, 4 cks. "
Coal Products—
Alizarine
Rotterdam, 10 brls. Hull & Netherlands S. S. Co
41 pks.
Aniline
Rotterdam, 97 pks. Hull & Netherlands S. S. Co.
Aniline Oil
Rotterdam, 9 cks; Hull & Netherlands S. S. Co.
Creosote Salt
Rotterdam, 12 cks. Hull & Netherlands S. S. Co.
Naphtha
New York, 1,447 brls.
Colours—
Amsterdam, 39 cks. Hull & Netherlands S. S. Co.
Antwerp, 260 Bailey & Leetham, Ld.
" 40 H. F. Pudsey
" 7 pks. Wilson, 8 cks. Sons, & Co., Ld.
Danzig, 1
Fiume, 100 bgs.
Hamburg, 7 cks. Sparkuhl & Steinle
" 1 Langley & Co.
" 2 dms. Wilson, Sons, & Co., Ld.
Rotterdam, 44 cks. Hull & Netherlands S. S. Co.
35 pks.
Cream of Tartar—
Bordeaux, 5 cks.
Dyestuffs—
Extracts
Bordeaux, 120 cks.
Copenhagen, 2 cs.
Rouen, 42 cks. Wilson, Sons, & Co., Ld.
Shumac
Palermo, 850 bgs.
Trieste, 163 pks. Wilson, Sons, & Co., Ld.
Dyewood—
Antwerp, 25 bls. Wilson, Sons, & Co., Ld.
Dyewood Extract—
Dunkirk, 16 cks. Wilson, Sons, & Co., Ld.
Farina—
Hamburg, 200 bgs.
Harlingen, 50 Hull & Netherlands S. S. Co.
Stettin, 100
Glucose—
New York, 248 brls.
Rotterdam, 40 bgs.
Glue—
Antwerp, 10 bls. Wilson, Sons, & Co, Ld.
Christiansund, 1 brl. "
Fiume, 100 bgs. "
Hamburg, 35
Rouen, 4 cks. Wilson, 8 pks, Sons, & Co., Ld.
Linseed Oil—
Amsterdam, 118 brls. Hull & Netherlands S. S. Co.
Manure—
Hamburg, 1,000 bgs.
Ochre—
Rouen, 75 cks. Wilson, Sons, & Co., Ld.
Paraffin Wax—
New York, 100 bgs. Wilson, Sons, & Co., Ld.
" 591 pks.
Phosphorus—
Hamburg, 5 cs. Wilson, Sons, & Co., Ld.
Potash—
Antwerp, 15 dms. Wilson, Sons, & Co., Ld.
Dunkirk, 11 cks. "
Soap—
Bari, 50 cs. Wilson, Sons, & Co., Ld.
Soda—
Ghent, 250 bgs. Wilson, Sons, & Co., Ld.
Sodium Nitrate—
Iquique, 5,644 bgs.
Starch—
Amsterdam, 120 cs. Hull & Netherlands S. S. Co.
Antwerp, 60
Bremen, 1,129 Veltmann & Co.
Ghent, 149 Wilson, Sons, & Co., Ld.
Stearine—
Antwerp, 38 bgs. Wilson, Sons, & Co., Ld.
Bergen, 1 cs.

Sulphur—
Catania, 50 bgs. Wilson, Sons, & Co, Ld.
" 1,050 / 50 t. / 110 cks.

Tallow—
Dunkirk, 228 cks. Wilson, Sons, & Co., Ld.
New York, 130 tcs. "
" 75 pks.

Tartar—
Molfetta, 3 cks. Wilson, Sons, & Co., Ld.

Tartaric Acid—
Rotterdam, 18 cks. Hull & Netherlands S. S. Co.

Turpentine—
Bordeaux, 4 cks. 5 brls.

Ultramarine—
Rotterdam, 4 cks. Hull & Netherlands S. S. Co.
3 cs.

Varnish—
Antwerp, 4 cs.

White Lead—
Amsterdam, 50 cks. Hull & Netherlands S. S. Co.
Dunkirk, 6
Ghent, 16 Wilson, Sons, & Co., Ld.

Wood Pulp—
Christiania, 2,000 bls. Wilson, Sons, & Co., Ld
Drontheim, 300 "
Gothenburg, 82 pks. "
Hango, 540 bls. J. Good & Sons
" 234

Zinc Oxide—
Hamburg, 1 ck. Lofthouse & Saltmer

Zinc White—
Rotterdam, 3 cks. Hull & Netherlands S. S. Co.

GLASGOW.

Week ending May 4th.

Acetic Acid—
Rotterdam, 8 cks.

Barytes—
Hamburg, 110 bgs.
Rotterdam, 122 cks. J. Rankine & Son

Boracic Acid—
Leghorn, 6 cks.

Castor Oil—
Antwerp, 28 cks.

Chemicals *(otherwise undescribed)*
Rotterdam, 1 ck. J. Rankine & Son
Hamburg, 2 cs.

Chromium Sulphate—
Rotterdam, 4 cks.

Coal Products—
Alizarine
Rotterdam, 58 cks. J. Rankine
79 brls. & Son

Aniline
Rotterdam, 12 cks. 1 cs. J. Rankine & Son

Aniline Salt
Rotterdam, 16 cks. J. Rankine & Son

Tar
Marseilles, 30 cks.

Colours—
Rotterdam, 1 ck. 2 cs. J. Rankine
9 bxs. 28 brls. & Son
Hamburg, 4 cks. 1 cs.
Rotterdam, 196 pks.
Hamburg, 15

Cream of Tartar—
Genoa, 3 brls.

Dyestuffs—
Extracts
Newport News, 55 brls.
Nantes, 50 cks.

Glucose—
Baltimore, 50 brls.
Newport News, 500

Glue—
Nantes, 50 bgs.
Rouen, 20 cks.

Glycerine—
Amsterdam, 30 dms. J. Rankine & Son

Ochre—
Cartagena, 80 bgs. 15 brls.
Newport News, 108
Marseilles, 12 cks. 240 cs.

Oxalic Acid—
Rotterdam, 10 cks. J. Rankine & Son

Painters' Colours—
Antwerp, 5 cs.

Potash—
Hamburg, 106 cks. 73 dms.

Pyrites—
Huelva, 2,163 t. Tharsis Co.

Salt—
Hamburg, 500 bgs. 249 cs.

Soap—
Newport News, 300 bxs.

Sodium Nitrate—
Rotterdam, 19 cks. J. Rankine & Son

Starch—
N'port News, 3,100 sks.
Antwerp, 80 cs.

Tartaric Acid—
Rotterdam, 10 cks.

Ultramarine—
Rotterdam, 2 cs. J. Rankine & Son

Varnish—
Antwerp, 13 crts.

White Lead—
Rotterdam, 74 pks.

Wood Pulp—
Gothenburg, 177 bls. 148 rolls
Stockholm, 4,300 Henderson, Craig & Co.
Christiania, 280
Drammen, 1,726 25 cs.

TYNE.

Week ending April 29th.

Antimony Ore—
Hamburg, 5 cs. Tyne S. S. Co.

Barytes—
Antwerp, 600 bgs. Tyne S. S. Co.
Rotterdam, 399 "

Bones—
Hamburg, 2 cs. Tyne S. S. Co.

Castor Oil—
Antwerp, 56 brls. Tyne S. S. Co.

Colours—
Antwerp, 4 cks. Tyne S. S. Co.
Hamburg, 1 cs. / 11 cks. "

Glue—
Antwerp, 10 bls. Tyne S. S. Co.

Paint—
Hamburg, 51 dms. Tyne S. S. Co.

Pyrites—
Huelva, 2,886 t. Tharsis Sulphur & Copper Co.

Saltpetre—
Hamburg, 20 cks. Tyne S. S. Co.

Soap—
Rotterdam, 2 cs. Tyne S. S. Co.

Starch—
Rotterdam, 176 cs. Tyne S. S. Co.

Ultramarine—
Rotterdam, 1 ck. Tyne S. S. Co.

Waste Salt—
Harburg, 260 t.

Wood Pulp—
Christiania, 80 bls.
Rotterdam, 110 Tyne S. S. Co.

Zinc Oxide—
Antwerp, 5 brls. Tyne S. S. Co.

GOOLE.

Week ending April 26th.

Acetic Acid—
Rotterdam, 2 cs.

Alkali—
Calais, 5 cks.

Antimony—
Boulogne, 4 cks.

Barytes—
Antwerp, 28 cks.

Caoutchouc—
Boulogne, 1 ck. 1 cs.

Colours—
Amsterdam, 2 cks. 1 cs.
Boulogne, 3 167 pks.
Hamburg, 6 9
Rotterdam, 190 39 34 bs.

Dyestuffs *(otherwise undes.)—*
Rotterdam, 289 cks. / 42 cs.

Dyestuffs—
Logwood
Belize, 368 t.

Farina—
Delfszyhl, 400 bgs.

Glue—
Antwerp, 15 bls.
Boulogne, 1 ck. 1
Rotterdam, 40 bgs.

Potash—
Calais, 28 dms
Dunkirk, 10 bgs. 40

Saltpetre—
Hamburg, 8 cks.

Soda—
Hamburg, 12 dms.

Wood Pulp—
Christiania, 4,000 bls.

Zinc Oxide—
Antwerp, 1 ck.

GRIMSBY.

Week ending April 29th.

Caoutchouc—
Hamburg, 1 cs.
Rotterdam, 11

Chemicals *(otherwise undescribed)*
Hamburg, 6 cks. 4 cs.
Rotterdam, 21

Colours—
Antwerp, 6 cks. 11 cs. 96 pks.
Hamburg, 19 254
Rotterdam, 3 kgs.

Dyestuffs—
Indigo
Hamburg, cs.

Farina—
Hamburg, 240 bgs.

Varnish—
Antwerp, 11 cs.

EXPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending May 4th.

Acids—
Shanghai, 2 cs. £17

Ammonia—
Palermo, 1 t. £65

Ammonia (Anhydrous)—
Shanghai, 2 cs. £28
Antwerp, 24 cyldrs. 55
Cologne, 44 115
Napier, 41 140
Gisborne, 50 170

Ammonium Carbonate—
Rangoon, 10 c. £14

Ammonium Sulphate—
Antwerp, 30 t. £330
Madras, 2 12 c. 45
Demerara, 50 541
Cullera, 304 17 2,290
Barbadoes, 51 625

Boracic Acid—
Wellington, 5 c. £7
Bombay, 1 t. 25

Borax—
Fremantle, 1 t. £17
Rotterdam, 50 cks. 75
Vancouver, B.C. 20 kgs. 18
E. London, 13 cs. 650

Caustic Soda—
Delagoa Bay, 1 t. 18 c. £16

Chemicals *(otherwise undescribed)*
Brussels, 20 kgs. £124
Cologne, 9 56
Rotterdam, 15 93
Gibraltar, 2 12
Genoa, 38 286
Limon, 5 pks. 12
Brussels, 1 brl. 2 27
B. Ayres, 17 cs. 28
Adelaide, 49 59
Perth, 18 36
Calcutta, 30 39
New York, 75 cks. 220
Fremantle, 86 90
Demerara, 2 16
Barbadoes, 5 10
Galatz, 20 18
Bombay, 5 14
Dunedin, 6 10
Lyttelton, 5 28
Hamburg, 39 1 28 255
Sydney, 8 53
Durban, 45 17 72
Wellington, 57 22
Shanghai, 3 10
Antwerp, 16 14 325
E. London, 3 32
Cape Town, 5 2 58

Citric Acid—
E. London, 2 c. £15
St. Petersburg, 1 t. 113
Rangoon, 10 3 cs. £19
Hamburg, 10 60
Sydney, 5 33
Hamburg, 1 120
Durban, 1 6

Coal Products—
Alizarine
Montreal, 30 cks. £347
Lisbon, 6 2 cs. 80
Boston, 57 637
St. Petersburg, 9 420

Aniline
Dunedin, 1 cs. £23

Aniline Oil
Genoa, 9 dms. £270

Aniline Salt
Genoa, 15 cks. £80

Anthracene
Rotterdam, 420 cks. £591

Benzol
Cologne, 80 cks. £175

Carbolic Acid
Colombo, 8 dms. £68

Creosote
Paris, 177 cks. £132

Naphthaline
Melbourne, 70 cks. £45
Newport News, 98 83
Cape Town, 2 pks. 5

Pitch
Shanghai, 35 brls. —
Montreal, 100 tcs. £86
New York, 100 bgs. 15
Dunkirk, 1,000 t. 1,250
Alexandria, 200 68
Antwerp, 633 768
Cette, 1,068 1,822
Helsingfors, 100 125
Sydney, 29 14

Pyridine
Cologne, 31 cks. £965

Tar
Hong Kong, 10½ brls. £10
Colombo, 10 14
Shanghai, 20 —
Melbourne, 30 dms. 6
Madras, 25 rnlts. 21
Helsingfors, 550 314
Delagoa Bay, 125 16

Toluol
Antwerp, 4 dms. £33

Coal Products *(otherwise undes.)—*
Durban, 605 pks. £58

Copper Sulphate—
Rosario, 10 c. £13
Genoa, 47 t. 10 1,218
Bordeaux, 10 2 234
Leghorn, 10 257

Cream of Tartar—
Melbourne, 1 t. £32
Durban, 10 kgs. 40

Disinfectants—
Hong Kong, 50 cks. £275
Singapore, 45 pks. 30
Sydney, 2 35
Penang, 5 450 dms. 255
Madras, 23 cs. 20 78
Antigua, 5 35

Christchurch, 4 17
Calcutta, 3 21
Colombo, 5 24
Genoa, 25 40
Auckland, 20 18
Shanghai, { 2 75 / 6 pks. 36

Guano—
Adelaide, 7 c. £18

Manure—
Grenada, 9 t. 16 c. £103
Berbice, 10 95
Trinidad, 50 460
Cullera, 465 5 1,710
San Francisco, 4 9 55
Bordeaux, 40 10 25
Barbadoes, 228 15 2,135

Oxygen Gas—
Amsterdam, 1 cs £14

Phosphoric Acid—
Durban, 15 cks. £51

Phosphorus—
Wellington, 4 c. 3cs. £49

Picric Acid—
Hamilton, Ont., 18 c. £117

Potassium Cyanide—
E. London, 15 t £1,601
Madras, 16 c. 52
Fremantle, 9 7 250 cs. 2 946
Cartagena, 2 22
Townsville, 6 650
Melbourne, 4 425
Delagoa Bay, 195 1,966
Pt. Elizabeth, 1 12

Potassium Sulphate—
Colombo, 2 t. 11 c. £31

Salammoniac—
Amsterdam, 10 c. £17

Salts of Lime—
New York, 10 c. £104

Salts of Soda—
New York, 4 c. £36

Saltpetre—
Bahia, 1 t. 13 c. £76

Sheep Dip—
B. Ayres, 8 t. 7 c. £187
Durban, 3 6
Delagoa Bay, 5 cks. 450 dms. 255

Soda—
Toronto, 3 t. 8 c. £30

Soda Crystals—
Calcutta, 3 t. £10

Sodium Bicarbonate—
Bahia, 9 c. £6

Sodium Sulphate—
Ghent, 50 t. £75

Sulphur—
E. London, 1 t. 16 c. £17
Newcastle, 2 13

Sulphuric Acid—
Bahia, 15 cs. £15
Madras, 19 t. 19 c. 242
Durban, 15 40 pks 48

Superphosphates—
Lyttelton, 10 t. £31
Morlaix 216 410

Tartaric Acid—
Wellington, 2 c. £9

LIVERPOOL.

Week ending May 3rd.

Aluminous Cake—
Calcutta, 56 t. 10 c. £120

Ammonia—
Rio de Janeiro, 4 cs. £26

Ammonium Carbonate—
B. Ayres, 1 t. 16 c. £42

Ammonium Muriate—
Barcelona, 2 t. 19 c. £63
Newfairwater, 3 56
Philadelphia, 20 2 510
Melbourne, 18 cks. 88

Ammonium Sulphate—
Cullera, 79 t. £881
Demerara, 50 6 c. 555
Trinidad, 24 18 273
Cheribon, 453 5 4,986
Valencia, 333 16 3,509
Las Palmas, 64 5 724

Arsenic—
B. Ayres, 2 t. £45
Singapore, 5 c. 5

Basic Slag—
Palermo, 5 t. £8

Bleaching Powder—
Ancona, 3 cks. 34 brls.
Athens, 3

Baltimore, 91 bls.
Bombay, 10 15 cs.
Cambrai, 17
Cape Town, 100 bxs.
Chicago, 96
Detroit, 26
Fiume, 16
Leghorn, 17
Messina, 10
Milwaukee, 150
Montreal, 105
Muncie, 69
New York, 259
Norkoping, 336
Philadelphia, 377
Rio de Janeiro, 20 cs.
Rotterdam, 26
Seville, 27 brls.
Springrove, 81
Venice, 20
Wabash, 35

Bones—
Rouen, 19 t. 18 c. 3 q. £257

Boracic Acid—
Rotterdam, 1 t. 6 c. £34
Antwerp, 1 19 1 q. 53

Borate of Lime—
Havre, 51 t. 17 c. £500

Borax—
Shanghai, 1 t. 9 c. 3 q. £25
Rosario, 9 2 8
Antwerp, 6 18 2 115
Vera Cruz, 7 3 6
Pasages, 12 10
Rotterdam, 1 15 1 30
Montreal, 15 3 255
Valparaiso, 10 13
Melbourne, 1 10 24
Braila, 1 16
Leghorn, 1 16
Havana, 8 18 2 147

Calcium Carbide—
Sydney, 3 t. £296

Calcium Chloride—
Melbourne, 10 t. 1 c. £21
Toronto, 7 16 17

Carbolic Acid—
Antwerp, 10 t. £209
Seville, 17 c. 2 q. 51
Baltimore, 10 1 83
Kobe, 7 8 3 351
Yokohama, 6 4 307
Rotterdam, 5 17
Hamburg, 4 19 309
Valparaiso, 4 22
Sydney, 13 22
Penang, 1 8 16
New York, 15 cks. 120

Castor Oil—
Axim, 6 cs.
Demerara, 10

Caustic Potash—
Chicago, t. 1 c. £25

Caustic Soda—
Acajutla, 30 dms.
Aguas Calientes, 36
Alexandria, 252
Algoa Bay, 80 cs.
Amsterdam, 87
Antwerp, 17
Barbadoes, 6
Barcelona, 235 20 cks.
Bari, 86
Barranquila, 15
Beyrout, 30
Bilbao, 30
Bombay, 1
B. Ayres, 650
Calcutta, 401
Callao, 50
Cartagena, 135
Catania, 150
Chicago, 50 90 bxs. 20 brls.
Corinto, 12
Corral, 10
Delagoa Bay, 212
E. London, 80
Galatz, 269 7 cks.
Gefle, 3
Genoa, 612
Gothenburg, 18
Hamburg, 155
Hamilton, 33 25
Haiti, 80
Hiogo, 1,230
Hong Kong, 45
Huelva, 3
Kavalla, 8
La Guayra, 12
Leghorn, 97
Libau, 601
Lima, 11
Lisbon, 162
Mazatlan, 150
Messina, 65

M. Video, 100
Montreal, 400
Naples, 20
N. Orleans, 100
New York, 25 50 brls.
Odessa, 280
Osaka, 50
Panama, 10
Piræus, 285
Pittsburg, 50
Pt. Adelaide, 30
Pt. Said, 40
Quebec, 500
Rangoon, 10
Rio de Janeiro, 96
Rio G. do Sul, 270
Rotterdam, 5 t. 2 c.
Rouen, 58
Salaverry, 10
San Francisco, 20 brls.
Seville, 490 111
Shanghai, 104
Stockholm, 52
Sydney, 14
Talcahuano, 125
Tampico, 200
Valencia, 65
Vera Cruz, 150
Volo, 190
Wellington, 53 pks.
Woodstock, 50
Yokohama 100
Zante, 2

Chemicals *(otherwise undescribed)*
Bourgas, 3 t. 6 c. £16
Rosario, 7 brls. 5
Alexandretta, 8 33
Alexandria, 20 66
Rangoon, 5 24
Hamburg, 145
Penang, 1 9 3 q. 10
Madras, 14 19 2 84
Constantinople, 5 10 30
Johannesburg, 3 300
Ibrail, 11 3 1 22
Havana, 1 kg. 2
Piræus, 1 ck. 8
Lisbon, 1 8
Montreal, 7 4 1 195
Quebec, 11 10 58
Oporto, 10 50
Bombay, 1 16 37 brls. 232
Halifax, 3 10 15
Antwerp, 2 cks. 19
Melbourne, 20 pks. 10
Pernambuco, 2 8

China Clay—
Baltimore, 655 cks.
Boston, 1,050
Calcutta, 640
Fiume, 880
Madras, 80
Magog, 60
Montreal, 40
N. Toronto, 60
Naples, 40
Philadelphia, 240 550 bgs.

Chloride of Lime—
Pernambuco, 15 c. 2 q. £5
Chicago, 3 t. 4 22
Shanghai, 1 5 10

Citric Acid—
Montreal, 1 c. £6

Citrochloric Acid—
Lisbon, 2 cs. £15

Coal Products—
Aniline Colour
Boston, 18 cks. 50 s. 28 kgs.
Calcutta. 15
Montreal, 2
New York, 21 pks.
Aniline Salt
Bari, 2 brls.
Boston, 60 cs.
Leghorn, 7 brls.
Syra, 10
Vera Cruz, 33 cks.
Creosote
S. Francisco, 1,995 cks.
Pitch
Antwerp, 130 t. 15 c.
Bombay, 25 cks.
Durban, 12 dms.
Genoa, 4
Pontevedra, 50 brls.
Tar
Galatz, 30 brls.
Para. 6 cks. 24

Copperas—
Valparaiso, 12 t. £22

Copper Oxide—
Piræus, 6 t. 12 c. £377

Copper Sulphate—
Piræus, 2 t. 2 c. £52
Patras, 20 6 600

Vigo, 1 17 45
Bordeaux, 348 7 7,410
Galatz, 5 3 q. —
Messina, 22 2 3 560
Nantes, 4 19 1 88
Leghorn, 104 18 188 brls. —
Genoa, 199 7 3 q. 4,143
Ancona, 9 18 1 217
Batoum, 5 15 3 135
Naples, 105 brls. 30 6 1 —
Bilbao, 10 1 1 234
Venice, 27 15 2 479
Calcutta, 1 10
Gutujewsky, 10 311
Calamata, 5 114
Lisbon, 135 15 3 3,215
B. Ayres, 12 5 230
Hamburg, 5 1 3 121
Oporto, 1 19 1 49
M. Video, 11 16 2 310
Montreal, 10 2
Catacola, 6 7 2 129
Rouen, 54 3 3 895

Cream of Tartar—
Rio Grande, 1 c. 1 q. £5

Disinfectants—
Constantinople, 5 c. £10
Rangoon, 10 kgs. 6 dms. 21
Kingston, 10 11
Bombay, 4 t. 19 2 q. 52

Glycerine—
Calcutta, 1 t. £55
Pernambuco, 11 c. 10
Panama, 2 6
B. Ayres, 1 19 1 q. 110
Lima, 1 9 3 69
Iquique, 19 3 59
Osaka, 2 120
Shanghai, 2 6
Bombay, 5 15
Bilbao, 9 14 3 365
Yokohama, 1 15 83
Nagasaki, 12 51
Hamburg, 2 6

Hydrochloride—
Bombay, 10 c. £19

Lead Nitrate—
Kingston, Ja., 3 t. 5 c. £60

Magnesia—
Champerico, 4 cs.
Philadelphia, 10
Trieste, 15 pks.
Vigo, 2

Manganese Sulphate—
New York, 2 t. 5 c. £30

Manure—
St. John's, N'fd, 3 t. £13

Muriatic Acid—
Mollendo 4 c. £6

Oxalic Acid—
Boston, 10 t. 3 c. 3 q. 23

Paint—
Adjuah. 2 cks.
Alexandria, 79 kgs. 40 dms.
Antwerp, 70 bgs. 12 brls. 10
Barcelona, 20 kgs.
Beyrout, 30
Calcutta, 72
Cape Town, 10
Cartagena, 50
Conakry, 3
Curacao, 50 25 cks.
Delagoa Bay, 24 1
Demerara, 42 3
Dunkirk, 4
Genoa, 1
Guayaquil, 24 cs.
Havana, 2
Hong Kong, 66 dms.
Iquitos, 2 cks.
Kerasunde, 4
Kingston, Ja., 160
Klein Popo, 2
Kotonou, 4 dms.
Lisbon, 1 brl.
Malta, 80 14 cks.
Monterey, 30 cs.
M. Video, 20
New York, { 32 / 40 dms.
Old Calabar, 35
Palma, 6
Para, { 4 cks. / 11 pks.
Pt. Said, 53
Rosario, 3 cks.
Sagua, 7 1
St. John's, Nfd., 9
Sierra Leone, 30
Trieste, 16
Valparaiso, 917 pks.
Yokohama, 66 cses.

Painters' Colours—
Bombay, 1,210 kgs. 47 cs. 383 pks.
B. Ayres, 26 71 cks.
Calcutta, 10
Callao, 50
Durango, 4 brls.
Genoa, 106 pks.
Guayaquil, 8 cs.
Havana, 2 brls.
Johannesburg, 23
Lisbon, 4 cks.
M. Video, 14 5 / 20 cs.
New York, 2 2
Para, 27 pks.
San Juan, 80

Paraffin Wax—
Genoa, 165 bgs. 7 cks.
Leghorn, 60 cs.
Naples, 100
Palermo, 10

Phosphorus—
Hiogo, 10 cs. £75
Osaka, 5 42
Shanghai, 14 21

Phosphates—
B. Ayres, 10 c. £19

Phosphorus (Amorph.)—
Hiogo, 30 cs. £132
Osaka, 5 42

Potash—
B. Ayres, 2 t. 3 q. £24

Potassium Bichromate—
B. Ayres, 1 t. 14 c. £49
Vera Cruz, 3 7 1 q 116

Potassium Carbonate—
New York, 9 t. 18 c. £178
Santander, 7 10

Potassium Chlorate—
Braila, 2 t. £64
Calcutta, 1 30
Hamburg, 15 c. 24
Hiogo, 3 15 115
Naples, 2 60
New York, 12 10 375
Tampico, 6 2 177
Vera Cruz, 1 30

Potassium Prussiate—
Genoa, 2 t. 9 c. / 4 cks. £221

Potassium Stannate—
Bombay, 16 c. 2 q. £64

Red Oxide—
Toronto, 10 c. £7

Salammoniac—
Alexandretta, 1 t. 5 c. 42
C. C. Castle, 9 9
Genoa, 1 1 35
Rio de Janeiro, 12 19
Samsoun, 1 33
St. Petersburg, 15 2 416
St. Louis, M., 1 31
Trieste, 1 1 32

Salt—
Adjuah, 5 t.
Algoa Bay, 5 7 c.
Antwerp, 100
Appam, 5
Baltimore, 275
Barbadoes, 120
Bayin, 4 10
Black River, 18 8
Bombay, 65 cs.
Bonny, 40 3 c.
Boston, 300
B. Ayres, 50
Calcutta, 11,872
Chama, 1 5
Chatham, 395
Chicago, 200
Conakry, 20 1
Demerara, 122
E. London, 6 2
Ghent, 60
Halifax, 196 10
Havana, 100
Horsens, 194
Manaos, 11 15
Manzanillo, 89 5
M. Video, 8 15
Mumford, 25
New York, 51
Old Calabar, 170 9
Opobo, 50
Para, 279
Sherbro, 196 17
Sulina, 50
Winnebah, 62 10

Salt Cake—
Antwerp, 240 t. £310
Delagoa Bay, 10 1 c. 25
Melbourne, 20 35

Saltpetre—
Para, 1 t. 5 c. £20
Pernambuco, 5 14 196

Soap—
Abonnema, 560 bxs.
Accra, 200
Aden, 50 bdls.
Akassa, 22
Alexandria, 231
Algoa Bay, 3,313 221 cs.
Amboina, 150
Antigua, 75
Antwerp, 129
Appam, 50
Arrecife, 50
Attabee, 100
Axim, 50
Baltimore, 2
Barbadoes, 500
Batavia, 1,000
Bermuda, 31
Beyin, 50
Bluefields, 476
Bocas del Toro, 100
Bombay, 720 45
Bonavista, 200
B. Ayres, 4
Buguma, 200
Buruto, 43
Cairo, 40
Calcutta, 50 500
Canaria, 208
Cape Town, 1,410 11
Chama, 100
Christiania, 100
Colombo, 4
Colon, 550
Curacao, 25
Demerara, 2,000
Dixcove, 50
Dubreka, 100
Dunedin, 2 tnks.
Dunkirk, 300
Durban, 100
Elmina, 50
Galata, 50
Genoa, 100
Gibraltar, 200
Gd. Bassa, 33
Grenada 225
Guayaquil, 100 1
Half Jack, 50
Hamburg, 260
Hong Kong, 801
Johannesburg, 100
Karachi, 1,125 25
Kotonou, 50
Lagos, 14 pks.
Lanzarote, 60
Las Palmas, 568
Laurium, 7 bdls.
Lydenburg, 150 6
Madras, 10
Manaos, 550
Monrovia, 136
Montreal, 1
Mossel Bay, 502
Mumford, 50
New York, 39
Old Calabar, 872
Para, 700 1
Penang, 400
Ponce, 20
Pt. Elizabeth, 2,700 50
Pt. Natal, 1,052 60
Pretoria, 50
Rangoon, 200
St. John's, N'fd., 1,498 533 pks.
St. Kitt's, 75 bdls.
St Thomas, 107 pks.
Sandy Point, 7
Shanghai, 14,563
Singapore, 3,840
Sourabaya, 30
Tangiers, 80
Teneriffe, 376
Trinidad, 1,750
Valparaiso, 1 14
Vancouver, 3
Wellington, 50
W. C. Africa, 2,116

Soda—
Barcelona, 40 cks.

Soda Ash—
Barcelona, 40 cks.
Bari, 300
Barranquilla, 250 cs. 30
Bombay, 100 kgs. 26
Boston, 200 bgs. 107 / 26 tcs.
B. Ayres, 45 324 / 40 brls.
Calcutta, 195
Callao, 25
Christiania, 140 2
Constantinople, 100
Copenhagen, 700
Genoa, 200
Ghent, 738
Hamburg, 800 50
Havana, 2 tcs.
Leghorn, 100
Libau, 180
Maranham, 38 brls.
New York, 1,556 40 tcs.
Norrkoping, 150 20
Montreal, 106
Para, 30 brls.
Peterboro, 5
Philadelphia, 200 68 tcs.
Piræus, 50
Rio de Janeiro, 23 brls.
Rio G. do Sul, 170
Rosario, 100
Salonica, 19
Seville, 75
Skien, 50 kgs.
Smyrna, 100 bgs.
Sydney, 36
Toronto, 307
Varna, 70
Zante, 48

Soda Crystals—
Alexandria, 50 brls.
Bari, 12
Calcutta, 33 kgs. 77
Campbellford, 25
Constantinople, 310
Gibraltar, 50
Malta, 35
New York, 140 cks.
Punta Arenas, 15 30
Rosario, 17
Quebec, 90 pks.

Sodium Bicarbonate—
Algoa Bay, 40 kgs.
Alicante, 30
Amsterdam, 50
Barbadoes, 125
Barcelona, 50 6 cks.
Bombay, 50 bgs. / 385 kgs.
Bourgas, 80
B. Ayres, 54 100
Callao, 25 pks.
Cartagena, 30
Christiania, 20 dms.
Danzig, 32 pks.
Dares-salam, 25
E. London, 22
Galatz, 20 8 brls. 20 dms.
Genoa, 50
Gibraltar, 20
Hamburg, 100 2 cks.
Hamilton, 50
Havana, 30
Kiew, 50
Kobe, 500
London, 20
Madrid, 300
Marseilles, 169 30 dms.
M. Video, 20
Montreal, 500
Odessa, 250 375
Oporto, 60
Pt. Elizabeth, 20 bgs. 10 cks.
Pt. Natal, 40 kgs.
Quebec, 100 dms.
Rangoon, 70
Rosario, 17 cks.
Salonica, 40
Stettin, 50
Sydney, 100 bgs. / 249 kgs. 20
Tampico, 20
Toronto, 150
Trinidad, 123
Valencia, 100 5
Valparaiso, 50
Vera Cruz, 75

Sodium Carbonate—
Boston, 56 brls.
New York, 70

Sodium Chlorate—
Amsterdam, 20 kgs.
Boston, 525
Gutujewski, 100
Philadelphia, 25

Sodium Hyposulphite—
Callao, 100 kgs.
Genoa, 15 50 brls.

Sodium Naphthionate—
New York, 15 cks

Sodium Oxide—
Florence, 5 cs.
St. Petersburg, 12

Sodium Prussiate—
Providence, 29 cks.

Sodium Silicate—
Callao, 10 brls.
Quebec, 25
Rouen, 16 cks.

Starch—
Copenhagen, 3 cks.
Townsville, 100 cs.

Sulphate of Lime—
Philadelphia, 1 t. £8

Sulphur—
Boston, 175 t. 7 c. £747
Chatham, N.B., 50 2 213
Colombo, 1 7
Montreal, 41 11 186
Para, 10 5

Superphosphates—
Charlotte Town, 20 t. £60
Cullera, 160 308
Gd. Canary, 19 46
Kalmar, 592 4 c. 2 q. 2,740
Malaga, 40 111
Valencia, 585 9 1,193
St. John's, N'fd., 3 6

Tartaric Acid—
Valparaiso, 6 c. £44

Varnish—
Accra, 4 dms.
Antofagasta, 20 brls.
Bari, 6 cs. 9
Bombay, 7
Constantinople, 6
Johannesburg, 6
Montreal, 14 pks.
New York, 3 cks.
Palma, 6

White Lead
Alexandria, 40 dms.
Antofagasta, 10 kgs.

GLASGOW.

Week ending May 4th.

Acetate of Lime—
Italy, 5 t. 2 c. 1 q.

Ammonium Sulphate—
Amsterdam, 50 t. 3 c.
Barbadoes, 190 6
Colombo, 9 13 2 q.
Demerara, 192 9 2
Genoa, 10 2
Rotterdam, 50 11 1
St. Kitt's, 25
Trinidad, 340

Bleaching Powder—
Calcutta, 74 t. 7 c.

Boracic Acid—
Hiogo, £64

Borax—
Ghent, £33 3s.

Coal Products—
Aniline Colours
Bordeaux, £20
Carbolic Acid
Brisbane, £55
Creosote Oil
B. Ayres, £90
Christiania, 10 10
Russia, 390
Pitch
Antwerp, £377
Italy, 405 18
Russia, 70
Sicily, 20
Tar
Danzig, 238 t.
Russia, £436
Tar and Pitch
Bombay, £55

Cobalt—
Rotterdam, £262 13s.

Dyestuffs—
Logwood
Brisbane, £30
Canada, 60
Portugal, 103

Farina—
Algoa Bay, £37 10s.
Calcutta, 125

Gutta Percha—
Amsterdam, £10

Linseed Oil—
Nagasaki, 950 gls.
Rockhampton, 1 t. 4 c.

Logwood Extract—
Bergen, £22
Canada, 88

Manure—
St. Kitt's, 34 t. 10 c.

Nitric Acid—
Madras, £94 10s.
Painters' Colours—
Algoa Bay, £27
Bombay, 768
Brisbane, 147 18s.
Bundaberg, 76
Calcutta, 190
Demerara, 21
Madras, 209 10
Nagasaki, 87
Oporto, 23
Rockhampton, 26
Rotterdam, 44
St. John's, N'fd., 175
U.S.A., 147
Paraffin Wax—
Antwerp, £30
Bordeaux, 115
Danzig, 10 t.
Genoa, 97
Italy, 727
Legborn, 109
Rio de Janeiro, 58
Russia, 1,011
San Sebastian, 25
Sicily, 42 15s.
Singapore, 24
Potassium Bicarbonate—
Ghent, £45
Kobe, 146
Rotterdam, 67
Yokohama, 146
Red Lead—
Italy, £35
Rosin—
Calcutta, £83
Madras, 10 t. 10 c.
Soap—
Canada, 2 t. 3 c.
Sodium Bicarbonate—
Ghent, 3 t. 10 c. 1 q.
Sulphuric Acid—
Colombo, £140
Madras, 217
Tallow—
Rotterdam, 5 t.

TYNE.

Week ending April 29th.

Alkali—
Christiania, 2 t. 6 c.
Reval, 10 13 3 q.
Rotterdam, 9 18 2
Antimony—
Montreal, 19 t. 10 c.
Rotterdam, 5
Barium Binoxide—
Rotterdam, 20 t. 0 c.
Barium Carbonate—
Hamburg, 175 t. 7 c.
Reval, 10
Bleaching Powder—
Bergen, 2 t. 1 c. 1 q.
Christiania, 42 1
Copenhagen, 6
Drontheim, 10 3
Gothenburg, 15 4 2
Hamburg, 22 15 2
Reval, 52 14 3
Rotterdam, 7 9 2
Castor Oil—
Montreal, 49 t. 8 c
Caustic Soda—
Aarhuus, 1 t. 9 c.
Antwerp, 9 11 2 q.
Drontheim, 3 9 2
Gothenburg, 4 18 3
Hamburg, 4 13 3
Montreal, 16 14 3
Nakskov, 1 9
Novorrossisk, 10 10
Reval, 10 10
Seville, 65 15
Smyrna, 1 3 1
Stavanger, 1 14 3
Chemicals (*otherwise undescribed*)
Montreal, 38 t. 11 c. 3 q.
Coal Products—
Carbolic Acid
Rotterdam. 5 t. 14 c.
Naphthaline
Reval, 37 t. 5 c.
Glue—
Montreal, 2 t. 12 c. 2 q.
Linseed Oil—
Montreal, 4 t. 1 q.
Litharge—
Montreal, 51 t. 8 c.
Magnesia—
Antwerp, 1 c.
Hamburg, 19 3 q.
Reval, 7 1
Manure—
Hamburg, 3 c. 3 q.
Rotterdam, 2 t. 3 3
Paint—
Antwerp, 9 t. 16 c.
Copenhagen, 2 2 q.
Hamburg, 1 6
Montreal, 8
Paraffin Wax—
Batoum, 2 t. 3 q.
Phosphorus—
Seville, 14 c. 3 q.
Red Lead—
Ancona 1 t. 1 c. 3 q.
Bonne. 2 3 3
Copenhagen, 10 2 3
Drontheim, 2 2 1
Gothenburg. 7 10 2
Hamburg, 5 10
Montreal, 18 12 3
Reval, 37
Rotterdam, 1 12 1
Seville, 2 2 1
Salt—
Copenhagen, 2 c.
Montreal, 2 t. 10 2 q.
Saltpetre—
Aarhuus, 5 t.
Sheep Dip—
Bergen, 2 c. 2 q.
Soap—
Copenhagen, 5 c.
Soda—
Ancona, 5 t. 3 c. 2 q
Christiania, 11 1
Rotterdam, 20 5
Soda Ash—
Gothenburg, 50 t. 2 c. 1 q.
Reval, 5 10 3
Sodium Hyposulphite—
Montreal, 8 t. 7 c. 2 q.
Sodium Sulphate—
Christiania, 100 t.
Surte, 320
Sulphur—
Gothenburg, 365 t.
Reval, 10 2 c.
Superphosphates—
Christiania, 110 t.
Tallow—
Hamburg, 6 t. 3 c. 2 q.
Varnish—
Montreal, 2 t. 1 q.
White Lead—
Batoum, 2 t. 3 c. 1 q.
Copenhagen, 1 1 1
Montreal, 56 18 2
Reval, 2 15 2

GOOLE.

Week ending April 26th.

Caoutchouc—
Boulogne, 32 pks.
Chemicals (*otherwise unescribe*)
Antwerp, 14 cks. 1 dm.
Coal Products (*otherwise undes.*)—
Amsterdam, 112 cks.
Antwerp, 20 dms.
Boulogne, 53 6 pks.
Ghent,
Hamburg, 5
Rotterdam, 30
Coal Products—
Pitch
Antwerp, 453 t.
Dyestuffs (*otherwise unaescribed*)
Ghent, 2 cks. 1 cs.
Hamburg, 4 1 / 60 bgs.
Painters' Colours—
Amsterdam, 1 ck.
Ghent, 2
Rotterdam, 12

GRIMSBY.

Week ending April 29th.

Alkali—
Gothenburg, 1 ck.
Caoutchouc—
Helsingborg, 14 bs.
Malmo, 2 cs.
Chemicals (*otherwise undescribed*)
Malmo, 1 kg. 5 crbys.
Coal Products (*otherwise undes.*)—
Dieppe, 2 cks. 11 pks.
Hamburg, 1
Coal Products—
Pitch
Dieppe, 5 brls.
Manure—
Esbjerg, 2,040 bgs.
Painters' Colours—
Antwerp, 1 kg. 4 cs.
Hamburg, 3 cks.
Rotterdam, 1 dm.

MANCHESTER.

Week ending May 3rd.

Bones—
Treport, 109 bgs.
Chemicals (*otherwise undescribed*)
Aleppo, 80 brls.
Alexandria, 100
Bombay, 65
Mersyne, 48
Montreal, 55 kgs.
Tripoli, 15
Coal Products—
Aniline Colours
Germany, 11 kgs.
Aniline Oil
Germany, 7 tins
Russia, 44 dms.
Aniline Salt
Germany, 10 cks. 1 brl.
Russia, 28
Carbolic Acid
Beyrout, 1 brl.
Ladinghafen, 55 cks.
Naphtha
Treport, 26 brls.
Naphthylamine
Germany, 54 cks.
Pitch
Belgium, 404 t. 19 c.
La Rochelle, 943
Copperas—
Tripoli, 30 brls.
Dyestuffs (*otherwise undescribed*)
Norway, 5 cks.
Dyestuffs—
Extracts
Belgium. 1 ck.
Glue—
Belgium, 10 cks.
Germany, 11
Holland, 15
Linseed Oil—
Alexandria, 11 brls.
Paint—
Beyrout, 60 kgs.
Paraffin Wax—
Rouen, 5 bls.
Salammoniac—
Alexandretta, 8 cks.
Mersyne, 1 brl.
Salt—
Canada, 350 t.
Montreal, 22 6 c.
Soap—
Alexandria, 50 bxs.
Belgium. 1 ck.
Sodium Bicarbonate—
Alexandria, 110 kgs
Beyrout, 15
Mersyne, 10
Sodium Silicate—
Sfax, 45 brls.
Sulphur—
Montreal, 10 brls.
Tallow—
Holland, 3 cks.
Turpentine—
Beyrout, 1 brl.
Venetian Red—
Alexandria, 135 cks.
Zinc Chloride—
Bombay, 3 cks.

HULL.

Week ending April 29th.

Ammonium Sulphate—
Rotterdam, 750 bgs.
Bleaching Powder—
Boston, 96 cks.
Caustic Soda—
Danzig, 35 dms.
Riga, 15
Chemicals (*otherwise undescribed*)
Abo, 13 cks. 2 pks.
Amsterdam, 24
Antwerp, 2 cs.
Bombay, 820
Christiania, 2 4 / 548 slbs.
Constantinople, 50
Copenhagen, 16 84 pks.
Drontheim, 3
Gothenburg, 60 359 slbs.
Hamburg, 85
Helsingfors, 23
Kurrachee, 450 6 100 pks.
Libau, 15
New York, 35 10
Norrkoping, 324 slbs.
Odessa, 267 70 52 pks.
Reval, 13 51
Riga, 302
Rotterdam, 6 50 9
Stockholm, 5 2
Coal Products—
Naphtha
Copenhagen, 1 dm
Pitch
Antwerp, 252 t.
Rouen, 174
Tar
Amsterdam, 35 cks.
Drontheim, 8
Gothenburg, 4
Hamburg, 10
Helsingfors, 150
Stettin, 5
Cottonseed Oil—
Amsterdam, 27 t. 1 c.
Antwerp, 30 4
Copenhagen, 3 9
Dunkirk, 5
Gothenburg, 10 5
Hamburg, 37 2
Rotterdam, 50 14
Rouen, 4 11
Stockholm, 20
Dyestuffs (*otherwise undescribed*)
Danzig, 2 cs.
Drontheim. 2
Stettin, 25 cks.
Linseed Oil—
Bombay, 3 t. 14 c.
Christiania, 8 8
Hamburg, 2 8
New York, 17 15
Paint—
Antwerp, 36 cks.
Gothenburg, 1 cs.
Helsingfors, 7
Painters' Colours—
Amsterdam, 5 cks.
Antwerp, 61 7 cs 49 dms.
Bombay, 18 132 779 pks.
Boston, 53
Constantinople, 1
Copenhagen. 4
Christiania, 10 / 4 4 24 dms.
Drontheim, 32 224
Dunkirk, 4 2
Ghent, 52
Hamburg, 26
Ha·lingen, 1
Helsingfors, 1
Konigsberg, 2
Kurrachee, 3 20 pks.
Liban, 86
New York, 70 10 dms.
Odessa, 34
Rotterdam, 17
Rouen, 17
Stockholm, 2 1 5
Stettin, 1 6 pks.
Soap—
Amsterdam, 25 cs.
Bombay, 5
Christiania, 100
Copenhagen, 1
Starch—
Boston, 50 cs
Tallow—
Amsterdam, 14 cks.
Varnish—
Amsterdam, 1 cs.
Antwerp, 2 cks. 1 dm.
Drontheim, 1
Ghent, 2 1
Gothenburg, 3
Hamburg, 3
Rotterdam, 3
Stettin, 6
Stockholm, 2

PRICES CURRENT. WEDNESDAY, May 10, 1899.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.

		£	s.	d.
Acids:				
Acetic, 25 % and 40 %	per cwt.	5/9 & 8/3		
,, Glacial	,,	35/-		
Arsenic S.G. 2,000°	,,	1	4	0
Fluoric	per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw.	per bottle	0	0	9
,, (Cylinder), 30° Tw.	,,	0	3	0
Nitric 80° Tw.	per lb.	0	0	1½
Nitrous	,,	0	0	1½
Oxalic	nett ,,	0	0	3
Phosphoric, 1750°	,,	0	0	11¾
Picric	,,	0	0	11½
Sulphuric (fuming 50 %)	per ton	15	10	0
,, (monohydrate)	,,	5	10	0
,, (Pyrites, 168°)	,,	3	0	0
,, (,, 150°)	,,	1	5	0
,, (free from arsenic, 145°)	,,	1	7	6
Sulphurous (solution) S.G. 1025	,,	3	0	0
Tannic (pure)	per lb.	0	1	2½
Tartaric	,,	0	1	0
Arsenic, white powdered	nett per ton	18	15	0
Alum, loose lump	,,	4	5	0
Alumina Sulphate (pure)	,,	3	15	0
Aluminoferric	,,	2	3	6
Aluminium (Ingot metal 98/99¾ %)	nett ,,	148	0	0
Ammonia, Anhydrous	per lb.	0	1	2
,, ·880 = 28° B.	,,	0	0	2¾
,, = 24° B.	,,	0	0	1¾
,, Carbonate	nett ,,	0	0	3
,, Muriate	per ton	18	15	0
,, ,, (sal-ammoniac) 1st & 2nd	per cwt.	35/- & 33/-		
,, Nitrate	per ton	33	0	0
,, Phosphate	per lb.	0	0	4
,, Sulphate (grey) London	per ton	12	0	0
,, ,, (grey) Hull	,,	12	0	0
Aniline Oil (pure)	per lb.	0	0	4½
Aniline Salt ,,	,,	0	0	4
Antimony	per ton	39	5	0
,, (tartar emetic)	per lb.	0	0	7½
,, (golden sulphide)	,,	0	0	9
Barium Chloride	per ton	6	17	6
,, Carbonate (native)	,,	3	15	0
,, Sulphate (native levigated)	,,	42/6 to 65/-		
Bleaching Powder, 35 %	nett ,,	4	5	0
,, Liquor, 7 %	,,	3	10	0
Bisulphide of Carbon	,,	11	10	0
Chromium Acetate (crystal)	per lb.	0	0	6¼
Calcium Chloride	per ton	2	7	6
China Clay (at Runcorn) in bulk	,,	17/- to 25/-		
Coal Tar Products and Dyes:—				
Alizarine (artificial) 20 %	nett per lb.	0	0	6¾
Magenta	,,	0	3	9
Anthracene, 3 % A, f.o.b. London	per unit per cwt.	0	0	4
Benzol, 90's	per gallon	0	0	7
,, 50/90 ,,	,,	0	0	7½
Carbolic Acid (crude 60°)	,,	0	1	11½
,, (crystallised 40°)	per lb.	0	0	6¾
,, (liquid 95/97%)	per gallon	0	1	0
Creosote (ordinary)	,,	0	0	3½
,, (filtered for Lucigen light)	,,	0	0	4
Crude Naphtha 30% @ 120° C.	,,	0	0	4
Grease Oils, 22° Tw.	per ton	3	0	0
Pitch, f.o.b. Liverpool or Garston	,,	1	5	0
Solvent Naphtha, 90% at 160°	per gallon	0	0	10
Copper	per ton	76	12	6
,, Sulphate	,,	26	10	0
,, Oxide (copper scales)	,,	57	0	0
Glycerine (crude) 80%	,,	24	10	0
,, (distilled S.G. 1250°)	,,	48	10	0
Iodine	nett, per oz.	0	0	7½
Iron Sulphate (copperas)	per ton	1	2	6
,, Sulphide (antimony slag)	,,	2	0	0
Lead (sheet)	,,	15	10	0
,, Litharge Flake (ex ship)	,,	17	0	0
,, Acetate (white ,,)	,,	24	0	0
,, ,, (brown ,,)	,,	18	10	0
,, Carbonate (white lead) pure	,,	18	10	0
,, Nitrate	,,	22	10	0

		£	s.	d.
Lime, Acetate (brown) (ex ship)	per ton	4	17	6
,, ,, (grey) (ex ship)	,,	8	0	0
Magnesium (ribbon and wire)	per oz.	0	2	3
,, Chloride (ex ship)	per ton	2	10	0
,, Carbonate	per cwt.	1	17	6
,, Calcined Magnesia	per ton	9	10	0
,, Sulphate (Epsom Salts)	per ton	2	12	6
Manganese, Sulphate	,,	14	15	0
,, Borate	per cwt.	2	0	0
,, Ore, 70%	per ton	3	10	0
Methylated Spirit, 61° O.P	per gallon	0	2	0
Naphtha (Wood), Solvent	,,	0	3	0
,, ,, Miscible, 60° O.P.	,,	0	3	10
Oils:—				
Cotton-seed	per ton	17	10	0
Linseed	,,	19	10	0
Stearine	,,	26	0	0
Phosphorus (Yellow)	per lb.	0	1	11
,, (red)	,,	0	2	8
Potassium Bichromate	nett ,,	0	0	3½
,, Carbonate, 90% (ex ship)	per ton	15	15	0
,, Chlorate	per lb.	0	0	3½
,, Cyanide, 98 %	,,	0	1	1
,, Hydrate (Caustic Potash) 90 %	per ton	22	0	0
,, ,, ,, 75/80 %	,,	17	15	0
,, Potash Hydrate Liquid 50 %	,,	11	0	0
,, Nitrate (refined)	,,	19	15	0
,, Permanganate	per cwt.	2	12	6
,, Prussiate Yellow	per lb.	0	0	8
,, Sulphate, 90 % (ex ship)	per ton	9	15	0
,, Muriate, 80 % ,,	,,	8	15	0
Silver (metal)	per oz.	0	2	4⅛
Sodium (metal)	per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 %	nett per ton f.o.r. w'ks.	4	15	0
,, ,, (Caustic Soda-ash) 48 %	,, ,,	4	5	0
,, ,, (Carb. Soda-ash) 48 %	,, ,,	4	0	0
,, ,, (Alkali) 58 % (Bags)	,, ,,	4	0	0
,, ,, (Soda Crystals)	,, ,,	2	10	0
,, Acetate (ex-ship)	,,	12	15	0
,, Arseniate, 45 %	,,	13	10	0
,, Chlorate	per lb.	0	0	3¼
,, Borate (Borax)	nett per ton	16	0	0
,, Bichromate	,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett	per ton 10 ton lots	7	12	6
,, ,, (74 % Caustic Soda) ,, ,,	,,	7	7	6
,, ,, (70 % Caustic Soda) ,, ,,	,,	7	0	0
,, ,, (60 % Caustic Soda) ,, ,,	,,	6	0	0
,, ,, (pure liquor 90° Tw.) ,, ,,	,,	3	10	0
,, ,, 77/78 % powdered (99 % hydrate)	,,	11	10	0
,, Bicarbonate (cwt. kegs)	,,	6	15	0
,, Hyposulphite	,,	5	5	0
,, Manganate, 25 %	,,	15	10	0
,, Nitrate (95 %) ex-ship Liverpool	per cwt.	0	8	0
,, Nitrite, 98 %	per ton	26	0	0
,, Phosphate	,,	10	7	6
,, Prussiate	per lb.	0	0	6½
,, Silicate (glass)	per ton	4	10	0
,, ,, (liquid, 100° Tw.)	,,	3	10	0
,, Stannate, 40 %	per cwt.	3	10	0
,, Sulphate (Salt-cake)	per ton	1	8	0
,, ,, (Glauber's Salts)	,,	1	12	6
,, Sulphide	,,	7	5	0
,, Sulphite	,,	5	0	0
Strontium Hydrate, 100 %	,,	9	10	0
Sulphocyanide Ammonium, 95 %	per lb.	0	0	5¼
,, Barium, 95 %	,,	0	0	4
,, Potassium	,,	0	0	6½
Sulphur (Flowers)	per ton	7	0	0
,, (Roll Brimstone)	,,	6	0	0
,, Brimstone: Best quality	,,	4	12	6
Superphosphate of Lime (26 %)	,,	2	10	0
Tallow	,,	24	0	0
Tin Crystals	per lb.	0	0	7¾
,, English Ingots	per ton	119	10	0
Zinc (Spelter)	,,	28	10	0
,, Chloride (solution, 100° Tw.)	,,	7	10	0
,, Sulphate, Crystal	,,	7	15	0

THE

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LATE ADVERTISEMENTS.

TENDERS.

TO TAR DISTILLERS.

THE Gas Committee of the Penrith Urban District Council are open to receive TENDERS for the purchase of the surplus Tar produced at their Gas Works during the year ending June 30, 1900.

Particulars may be obtained from the undersigned, to whom Tenders must be delivered by Wednesday, the 24th inst., stating price per ton delivered into Contractors' Tank-waggons on rail at Penrith Station.

E. SHAUL,
Manager.

Gas Works, Penrith,
May 12, 1899.

THE Llandudno Urban District Council invite TENDERS for the purchase of the Ammoniacal Liquor and Tar to be made at the Llandudno Gas Works during a period of Twelve Months next ensuing.

Tenders must be sent in to the undersigned on or before the 6th of June next, endorsed "Liquor and Tar."

ALFRED CONOLLY,
Clerk to the Council.

May 13, 1899.

Notices.

All communications for the *Chemical Trade Journal* should be addressed, and Cheques and Post Office Orders made payable to—

DAVIS BROS, 32, Blackfriars Street, MANCHESTER.

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Advertisements.

Prepaid Advertisements of Situations Vacant, Premises on Sale or To be Let Miscellaneous Wants, and Specific Articles for Sale by Private Contract are inserted in the *Chemical Trade Journal* at the following rates:—

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THE ST. HELENS EXPLOSION.

TOWARDS the close of last week, one of the heaviest disasters that has ever overtaken the chemical trade befel the United Alkali Company, Ltd., at their potassium chlorate refinery (Kutrz's Works), St. Helens.

Disastrous explosions are somehow associated with coal mining, but in this particular direction the heavy chemical trade has enjoyed a merciful freedom. The St. Helens affair is without parallel in the history of the trade, the nearest approach to it having been, we should think, the destruction of the Cornbrook Chemical Works in 1886; but then these works were engaged in the manufacture of picric acid, which is known to possess explosive tendencies.

An illustrated account of the accident occurs elsewhere in this issue, but in accordance with the opinion expressed therein, we think it is best to defer criticism until the inquest (which will in a sense be conjointly a Government inquiry) has been held. If we grant the pitifulness of the inevitable, there is room for congratulation on one point, at least, namely, that such a violent explosion, dealing such widespread destruction, should happily result in such a comparatively slight loss of life.

The comments of the daily newspaper leader-writers are (as is usual on such occasions) more amusing than trustworthy. The *Daily Chronicle* doubtless thinks St. Helens is somewhere within the zone of the black country:—

"The houses, streets, and people are merely a sulphuretted community existing by the grace of the United Alkali Co. . . . . We do not know that the world would be much poorer if the whole framework of St. Helens had disappeared in a deluge of vitriol."

In reality our gravest fears are centred round the fact that the destruction of so much chemical plant has thrown out, and will keep out, of employment, so many of the workpeople of St. Helens, that it will make the "world" many pounds a week poorer, as far as *they* are concerned, for a good while to come.

The *Manchester Guardian* was more amusing than abusive. In its editorial lament, it bewailed:—

"A detonation sufficiently violent to wreck a row of enormous vessels filled (*sic*) with vitriol. . . . Hundreds of tons of vitriol are said to have inundated the burning building in which eighty tons of the chlorate was stored, and it was then, no doubt, that the tremendous explosion occurred."

This is rather contradictory, apart from the "science" and the chambers "filled with vitriol," because we thought it was the "detonation" that wrecked the vessels of vitriol. Here, however, we have the statement that the vitriol attacked the chlorate, and then "no doubt" the explosion occurred. In reality it was the explosion that knocked down the chambers and let the acid escape. And even then it was impossible for it to reach the chlorate unless the acid could "inundate" it *up an incline* of about 1 in 5, because the chlorate store stood on the top of the waste-bank, about 90 feet

above the level of the chambers, and quite 150 yards away, with a railway intervening.

One thing, however, is certain, and that is the intensity of the heat of the fire, which within a minute or two from the outbreak, was sufficient to drive men accustomed to face great heat to a distance of 30 or 40 yards. This extreme fierceness of the heat makes it easier to understand why the explosion followed so quickly upon the outbreak of the fire, independently of any theory as to the precise cause or evolution of the explosion itself.

THE POSSIBILITIES OF LIQUID AIR.

LIQUID air represents air compressed to about 800 atmospheres, but existing without pressure. No heavy and excessively strong tanks are needed for storing it. If it be pumped (says a writer in the *Engineering Magazine*) into a closed receptacle under regulated pressure it may be evaporated by the heat of the air, or that of surrounding objects, or it may receive heat from bodies undergoing refrigeration, as water being converted into ice; after which heating operation it may be further heated to the melting-point of lead by heat of combustion, and be finally used in a suitable engine where its expansion may develop power. During its expansion and delivery of power to the pistons of the engine it may become so cooled as to be discharged from the exhaust at nearly normal atmospheric temperature and pressure. The power expended in compressing and liquefying air is, of course, converted into heat and thrown away. The product, liquid air, has no inherent power of energy in itself. It represents negativity, bearing somewhat the same relation that an exhausted globe does to the surrounding air. It may become the means for rendering the normal energy in the surrounding air available. Liquid air has capacity for taking up the ordinary heat of surrounding objects and thus acquiring pressure. It can be superheated very efficiently, and so used in the form of compressed air in an engine. The superheating will, of course, tend to raise greatly the total efficiency. The inevitable losses in the compressing and liquefying processes would in part be made up in the added heat, the amount of which is small and efficiently employed. We have no reliable data of large scale operations, and can as yet reach no certainity as to the efficiency attainable in compression and liquefaction or in recovery of power. It is possible that the separation of oxygen, which would probably possess a value in metallurgy, might tend to diminish the cost of condensation. So also the refrigeration which is obtained during evaporation might help the recovery end. Where so much is "in the air" we must be content with suggestions only, and they may never be realised in practice. The power required to be expended in liquefying a given amount of air can be approximately estimated, and an assumed efficiency of plant may be made to do duty in place of exact figures where none are to be had, and if the conclusions based thereon are understood as tentative, and subject to extensive modification in view of further advances in our knowledge, no harm is done. In making an estimate of liquid air as produced on the large scale, the factors of plant, efficiency, maintenance, &c., come in to a greater or less extent. Assuming that air be compressed as nearly isothermally as possible, and that in a large plant a possible total efficiency of 70 per cent. might probably be realised, each horse-power hour might thus be expected to compress nearly 10 lb. of air to a pressure of 2,000 lb. to the square inch. If such compressed air, on being expanded in a very carefully arranged self-intensifying apparatus, should condense 25 per cent. of the air admitted, we would have about 2½ lb. of liquid air per horse-power hour. The assumed proportion, 25 per cent., seems not improbable in view of all the data – meagre enough, it is true—which have come to the writer's knowledge. If the power-cost be taken at $20 per year in large units and an additional charge of $10 be allowed for each horse-power of the compressing and condensing plant, its interest, maintenance, and operating expenses, the cost per pound, of liquid air would be about one-sixth of a cent., assuming the plant to run 7,200 hours per year. This estimate, subject to modification from the very nature of the problem, would make the liquid air cost for production about eight cents per cubic foot. If oxygen, separated by fractional distillation, possessed a value for equal amounts in excess of the cost of the air, the remaining nitrogen would, of course, be producible at a lower figure. It is probably within the possibilities that a cubic foot of liquid air or nitrogen, if allowed to heat from its surroundings and then be further heated to 200° C., could, in a high-pressure engine, yield about five horse-power hours. If at the same time the vaporisation of the air were attended by useful refrigeration, as in making ice, the cost of recovery would diminish. Need it be said here, however, that even if the cost of horse-power of recovered energy much exceeded that which is indicated in the foregoing estimates or assumptions, a demand may still exist for a source of power having great compactness, freedom from nuisance, no heated nor noxious exhaust, and of unequalled controllability? The horseless-vehicle problem certainly presents us with an instance in point. It would seem, however, that certain uses may be found for liquid air in which considerations of cost are not so important as is the ability to obtain the effects in view. In warfare, for example, the possession of highly concentrated energy-stores under control is very important. Liquid air can be rapidly converted into compressed air at six tons per square inch. This would probably be useful in the projection of high explosives. Compressed air is now used for propelling mobile torpedoes, or fish-torpedoes, as they are called. Dirigible torpedoes either depend for power upon the compressed air or the electric energy of a storage-battery. Compressed air requires high pressures and very strong and heavy containing vessels. Liquid air can be stored without pressure or at low pressures, and can be evaporated at any desired pressure, while its bulk represents that of air under 800 atmospheres. A storage-battery would, probably, be from five to ten times as heavy as liquid air in a receptacle, for equal available energy. But no storage-battery could be discharged at an equivalent rate. Submarine boats and flying-machines may yet find use for liquid air. In the submarine boat it could be evaporated by the heat of the surrounding water, and, after furnishing power, it would ventilate the boat. Before its final discharge it could be burnt with oil in a fuel-engine for further power. We may find use for it in the flying-machine. For emergency work it could, in evaporating, cool the cylinders of a fuel-engine, and yield power as a result. Moreover, control of the submergence of a boat could be effected by the use of liquid air, so easily gasified, to add to the displacement.

COMPENSATION FOR SUBSIDENCE IN CHESHIRE.

IMPORTANT SCHEMES.

THE first official report by the representatives of the Northwich Urban Council on the Compensation Board was submitted at a meeting of the former body on Tuesday evening. It transpired that the Board were purchasing property in the worst parts of the district with a view of removing it out of the scope of compensation. It was suggested by some members of the Council that the tax of 3d. per thousand gallons of brine pumped was responsible for a local depression of the salt trade. The representatives replied that now that the Board was in working order the administration and general expenses and the amount of compensation claims would be so reduced as to make it extremely probable that a rate of 1d. per thousand gallons would suffice. The Board had instituted a competition, and had obtained model plans of a building suitable for erection on sinking land. These plans were available for the general public, and grants would be made by the Board to those who adopted the suggestions which would minimise the amount of damage occasioned by subsidence. The first rate levied by the Board amounted to £6,618., but, owing to litigation, etc., the board were only able to get £3,857., of which amount £3,572. was paid for the cost of procuring the Compensation Act, provisional orders, etc. On the next rate they received £7,433, and 194 claims were sent in, amounting in the total to £27,411. After adjudication, claims up to £4,530. were allowed. For the following period 70 claims were sent in and £709. were allowed. The members of the Council expressed pleasure that the pessimistic view that the salt trade was to be ruined by reason of the brine tax was not likely to be realised. Messrs. Bratt and Cliff (the Compensation Board representatives) assured the authority that at the present time there was more brine being pumped in the district than for many years past, and that there was every reason to anticipate a brighter future for the staple industry. As brine pumpers discovered that the compensation tax was only a small item, and that at the same time it provided a just redress for those who had suffered, they would be induced to settle in the district. Thanks were tendered for the report.

An Automatic Gas Buoy.—The Trinity House authorities have, after much persuasion, decided during the ensuing summer to erect a gas-lighted automatic sound producing buoy at the Manacle Rocks. The present bell-buoy is almost practically useless, but the new light will not interfere with the others in the Channel. The decision is a result of the agitation that followed the wreck of the Mohegan.

Messrs. Wallach Brothers, of 57, Gracechurch-street, London, have an exhibit of various apparatus for the prevention of accidents in industrial concerns at the Greater Britain Exhibition, Earl's Court, which will doubtless be of great interest to our readers. It comprises the following important apparatus:—Patent pneumataphor for breathing in poisonous atmospheres, especially important for miners; wire embedded gauge glass protectors, respirators, eye protectors, head and face masks, hand protectors, and other protective coverings.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Explosives. C. H. Curtis and G. G. André. 9,062. May 1.
Closing Device for Receptacles containing Dangerous Substances. F. Piersig. 9,088. May 1.
Manufacture of Portland Cement. J. R. Hatmaker. 9,095. May 1.
Treating Raw Sugar. F. Casper. 9,122. May 1.
Treating Slurry in Portland Cement Manufacture. P. J. Neate. 9,139. May 1.
Manufacturing Caustic Alkali from Alkali Metal Amalgams. J. W. Kynaston. 9,145. May 1.
Solvents for the Extraction of Precious Metals. S. Trivick. 9,154. May 1.
Manufacture of Calcic Carbide and Illuminating Gases. H. Eldridge, D. J. Clark, S. and A. A. Blum. 9,156. May 1.
Manufacture of Formic Acid Products. A. Béhal. 9,259. May 2.
Disintegrating Superphosphates. A. G. Brookes. 9,260. May 2.
Manufacture of Cyanides. F. Howles. 9,268. May 2.
Leather Manufacture. W. S. Smith. 9,279. May 3.
Paint Removers. R. H. Mercer. 9,337. May 3.
Distemper Paints. R. H. Mercer. 9,338. May 3.
Artificial Marble. J. Gernaert. 9,360. May 3.
Carbon Dioxide and like Gases for Fire Extinction. J. A. Wilson. 9,391. May 4.
Sheep Dip. Odam's Manure and Chemical Co., Ltd., and H. E. Macadam. 9,400. May 4.
Desulphurising Hydrogen Sulphide Gas. H. W. Hemingway. 9,432 May 4.
Manufacture of Ammonium Sulphate. L. Wirtz. 9,438. May 4.
Secondary Batteries. J. T. Niblett and M. Sutherland. 9,456. May 5.
Filter Presses. W. Warner. 9,463. May 5.
Improvements in the Manufacture of Viscose. O. Imray. 9,577. May 6.
Producing Pure Ferrous Salts. T. O. Kent. 9,591. May 6.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improved Means for Recovering Sulphuric Acid and Sulphuric Anhydride from Gases. T. R. Shillito, 15, Took's Court, London. (Communicated by A. G. für Zink-Industrie, vorm, W. Grillo, and Dr. M. Schroeder, both of Hamborn, Germany.) Eng. Pat. 25,158. November 29, 1898.

The difficulty of obtaining platinum in a sufficiently divided form to further the catalytic action by which sulphuric anhydride can be recovered from gases containing sulphur dioxide has long been known, and efforts have been made to cope with it by Winkler and others. Instead of using solid bases such as pumice, asbestos, etc., the patentee employs soluble salts of the alkalies or alkaline earths. As contact bodies of 0·1 per cent. platinum and even less are efficacious, the soluble salts enable a better distribution and dilution of the platinum to be achieved. A suitable quantity of platinum chloride is, therefore, added to a solution of an alkaline salt, and the whole evaporated to dryness; the mass which results is broken up into a convenient size, and packed into the reaction towers. The dust which is sieved out is re-dissolved. Sulphates are preferable to chlorides or carbonates for obvious reasons, but double salts of the alum type may be used in place of single salts. The technological advantages of this form of contact material are threefold. It is easily prepared, of superior efficiency, and the dust which chokes up and impairs other mediums, is readily removed and the material revivified.

An Improved Exhauster for Poisonous or Corrosive Gases and the like Chemical Purposes. J. Müller, 1, Klapperhof, Cologne a/Rhine. Eng. Pat. 25,010. November 26, 1898.

The exhauster is of the centrifugal fan type, and made of glass throughout. The shell is made in two halves, and of such a shape that when bolted together an escape pipe is formed at the bottom and a chamber in which the fan runs. Two branch pipes enter the casing or shell about the centre of rotation of the fan, which unite in one above the fan, and can be connected to the source which it is desired to exhaust. There are 3 figures.

An Improved Process for Utilising Potassium Carbonate and Sodium Carbonate Lyes. H. Glaubitz, Fraulautern a/Saar, Germany. Eng. Pat. 27,265. December 24, 1898.

The lyes are mixed with calcium oxide, and heated until reaction sets in, at the end of which a dry powder results. Thus a solution of 100 parts of potassium carbonate in from 70 to 80 parts by weight of water are mixed with 40 parts by weight of calcium oxide, the mixture being heated and continually stirred. When the reaction is complete 200 parts of a dry mass are obtained, which crumble into a white powder on cooling. This product is composed of undecomposed potassium carbonate and hydroxide, also carbonate and hydroxide of calcium. On dissolving in water a further production of potassium hydroxide results. This composition, either in the solid form or in solution is particularly suitable for bleaching and mordanting purposes.

A New or Improved Damp-resisting, Washable, Sanitary Water Composition or Paint. T. Cardiff, 5, Mark-street, Dublin. Eng. Pat. 12,038. May 27, 1898.

One hundredweight of commercial roached lime is added to about 80lbs. of crystallized sugar dissolved in about 28 gallons of boiling water. Also ¾-cwt. of whiting is added to 8 gallons of the mixture just named. To prepare the distemper or paint equal parts of the lime mixture and the whiting mixture are mixed with enough of the combined liquid (or that obtained as the second mixture), until the desired consistency is attained.

An Improvement in the Treatment of Mineral Phosphates. Electric Reduction Co., Ltd., 22, Austin Friars, London. (Communicated by W. T. Gibbs, Buckingham, Quebec, Canada.) Eng. Pat. 13,131. June 11, 1898.

In the electrical decomposition of phosphates by heat, for the production of phosphorus, silica is the substance generally employed to take the place of the phosphoric acid in the mineral; the acid being decomposed into phosphorus by the carbon, which is added for the purpose. The present improvement consists in substituting siliceous and aluminous potash or soda-bearing compounds such as felspar for the silica, so that a slag of commercial value is produced in which the potash and alumina may readily be converted into alum by treatment with sulphuric acid; or the potash and alumina may be otherwise recovered. By providing an insufficient quantity of carbon, a certain amount of phosphate may also be left in the slag to give it a value as a fertilizer, either before or after the removal of the potash and alumina.

THE MAGNOLIA METAL AWARD.

IN the Queen's Bench Division last week, Mr. Justice Mathew, gave judgment in the case of the Magnolia Metal Company (of America) and others v. John Sugden, W. E. Watson, Alfred Brown, the Magnolia Metal Company, and the Atlas Bronze Company. The action was brought by the plaintiffs to recover damages from the defendants in respect of an alleged conspiracy which the defendants were stated to have entered into to appropriate the plaintiff's business in anti-friction metals. After a trial before Mr. Justice Mathew and a special jury his Lordship granted an injunction against Sugden, Watson, and Brown in the terms of a restrictive covenant for five years from manufacturing or selling anti-friction metals or alloys for a like period. Watson appealed against this, and accordingly the order was modified so as to restrain him for five years from the termination of the contract from manufacturing or selling anti-friction metal as agent or trustee of Sugden or for his benefit.

Mr. Justice Mathew now delivered his reserved judgment. He said he had to determine what the damages were in respect of the defendants' action, and although some figures had been given by counsel they were only approximate. The position taken up by the defendants was that no damages ought to be awarded the plaintiffs. That position, however, was wholly untenable. Alternatively the defendants said that damages should be limited to a sum of £900., but that also could not be maintained. Therefore he had to consider what damages had been sustained by the plaintiffs since the breach of contract in 1891. He came to the conclusion that his judgemnt ought to be against the defendants for the sum of £5,500.

NATURAL GAS IN KENT.—Practical use is about to be made of the storage of natural gas discovered some time ago at Heathfield, Kent, where petroleum springs have been found. The gas which arises from these subterranean springs has been burning continuously from a jet for two and a half years, and as the experiments have proved that the gas is suitable for practical purposes it has been decided to light the railway station premises with it.

NEW FELLOWS OF THE ROYAL SOCIETY.—The Council has recommended the following gentlemen for election to the Society:—Prof. W. F. Barrett, Surgeon-major David Bruce (Army Medical Staff), Mr. H. J. Horstman Fenton, Mr. James Sykes Gamble, Prof. A. C. Haddon, Mr. Henry Head, Prof. C. Lloyd Morgan, Mr. Clement Reid, Prof. Hele Shaw, Dr. Ernest Henry Starling, Prof. H. W. Lloyd Tanner, Prof. Richard Threlfall, Dr. A. E. Tutton, and Prof. B. C. Allen Windle.

THE ST. HELENS DISASTER.

EXPLOSION AT THE KURTZ CHLORATE REFINERY.

[BY OUR OWN CORRESPONDENT.]

ON Friday, last week, as we were going to press, one of the most disastrous explosions ever known in the heavy chemical trade, from the days of Gossage's windmill acid-condenser down to the present time, occurred at the Kurtz Works (United Alkali Co., Ltd.), St. Helens.

Numerous accounts of the origin of the accident were soon current, some of which were unintelligible, seeing that chlorate of potash *per se* is not explosive ; so a representative of the *Journal* visited the scene of the disaster, and, thanks to the courtesy of the officials, was able to view the scene and obtain the following authentic details.

In order to appreciate the circumstances it is necessary to first understand

THE DISPOSITION OF THE WORKS.

By the aid of the four views given on page 335 this can readily be done. In view No. 1 we are looking from the waste heap at the back of the works towards the entrance. Entering Kurtz's works proper from the road the Gas works lie to the left, and these works abut on to the Warrington-road, as seen in No. 3, this road being spanned by the bridge just visible in the left-hand corner of view No 1, and seen in the distance in No. 2. On the other side of the Warrington-road are the Hardshaw Brook works (view No. 3) and these extend up to the railway seen in view No. 4. Crossing the railway by the continuation of he bridge shown in Nos. 1 and 2 we come to an old alkali-waste tip, and here, at a considerable elevation above the level of the other works, is situate the chlorate of potash refinery and grinding mills belonging to the Kurtz works. The twelve vitriol chambers of the Hardshaw Brook works are thus bounded by the Warrington-road (view No. 3) on the one side, and the railway on the other (view No 4), the latter view being taken from the end of the bridge, which is barely visible on view No. 1.

The remains of the refinery are shown in No. 1, the chimney having escaped intact. It will also be noticed that the Hardshaw Brook vitriol chambers (as seen by the wreckage visible behind the chimney in the foreground) and the gas holders are in a straight line. Turning now for a moment to the two views designated Figs. A and B, we have a detailed view of the

SEAT OF THE EXPLOSION.

The chlorate mills, which are in the foreground of view No. 1., and again in the background of Fig. A, are about the only portion of the plant which is fairly intact.

The fire which lead to the disaster broke out in the crystallising vats shown in the left foreground of Fig. A ; a wall running from this point down towards the mills in the distance, thus separating the chlorate store (containing about 156 tons of finished chlorate) from the crystallising battery. A better view of the site where this store formerly was is obtained from Fig. B. The crystallising vats actually in use were those on which the firemen are playing, those near the three men in the foreground having been old vats lying outside the crystallising house, the wreckage of which lies near these old vats, and is partially seen in the foreground of Fig. A. The white patch visible in the extreme left hand corner of Fig. B. is a depression in the floor of the chlorate store caused by the explosion, the white chlorate being scattered all round.

THE TRAIN OF EVENTS.

As just stated, the immediate cause of the explosion was the firing of one of the vats in the crystallising house ; as to the origin of the fire itself nothing definite is known. At the time—about ten o'clock in the morning—work had been proceeding for several hours, when a foreman cooper named Bates was alarmed to see, as he passed through the crystallising-house, that one of the wooden lead-lined crystallisers was on fire. He at once raised the alarm, and the Corporation fire brigade was summoned, the manager (Mr. Rudge) and other officials taking steps in the meantime to get the firm's fire extinguishing appliances into operation. It was apparent, however, that the building, which was not of a substantial character, was doomed. In a few minutes every vessel was ablaze, and the flames beating, against the wall and roof separating this room from the store on the left (Fig. A), quickly spread to the adjoining store, in which about 156 tons of chlorate were packed. The half-dozen men or so who were at work in

Jordan & Metcalfe, Photographers] FIG. A. [*St. Helens.*

the immediate neighbourhood had only just time to scramble down the bank into the waggon road, to get away from the heat of the fire, before a fearful explosion occurred, the whole affair taking place within ten minutes of the fire first breaking out.

The explosion has been variously compared to an earthquake shock and a discharge of heavy artillery; certainly nothing like it has been known in the district before. The discharge was accompanied by a terrific sheet of flame, followed by a blinding cloud of dust and smoke. The Hardshaw Brook vitriol chambers, which were erected sheer upon the wall of the Warrington-road, collapsed. All of them were wrecked, and ten of them so completely that in a moment at least 800 tons of acid flooded the road, the railway siding, and the land upon which the chambers themselves had stood.

Following its course (see view No. 1) the force of the explosion next struck the gas-holders. The columns to the right and left were snapped at the base, but remained standing, and the holder, unable to expand sideways, bulged at the top and tore right across. Inside five minutes the holder had collapsed, and the 250,000 cubic feet of gas therein had been burnt away, it being probably ignited by some of the burning timbers from the chlorate store, which were scattered freely over the neighbourhood. It continued its line of progression into the town and up Church-street, in which hardly a window, plate-glass or otherwise, escaped, this being practically true for a radius of a mile round the works.

In the opposite direction (see view No. 1) the force of the explosion expended itself for the most part against a higher tip (see Fig. A), blowing one man over it into Langtree-street below, and blowing over a crane. Then being deflected somewhat it spent itself on a number of side streets, mostly cul-de-sacs, in which there are many rows of workmen's cottages, and these presented a piteous sight. Whole rows of houses were dismantled as to their doors and windows, their chimney stacks, and, in some cases, their roofs. These dwellings being obviously unsafe, have since been boarded off and condemned by the Corporation. Both the gas-holders have been injured. Nearly all the columns of the front one are cracked at the base, and one of the girders that tie the columns at the middle has been completely torn out, and fallen to the ground, together with several of the guide wheels. The columns of the second holder (which is behind) are also so skewed that only the first lift of the holder can be used. The roofs of most of the neighbouring works and the windows of the offices and signal-boxes adjoining have been shattered by the falling *débris*, while the fields for some hundred yards round are peppered with brick-bats, as if it had hailed bricks. The shock was distinctly felt all over the district within a radius of 20 miles, and in isolated cases even further afield.

As soon as the flames had been subdued and the overhanging clouds of gas had somewhat cleared away,

A SEARCH PARTY

was organised, and surgical aid was afforded, as far as was possible, by Dr. John Cotton, junr., who was one of the first medical men on th spot. The first body to be reached was that of John Duffy, a labourer, who resided in Barber-street. His remains were very badly mutilated. Next the searchers discovered the body of Frederick Faram, a shipping clerk employed by the Company. He, like Duffy, was quite dead; in addition to other injuries a large block of wood had pinned his head to the ground. Mr. Faram, who was highly respected in St. Helens was a married man of about 60 years of age. A workman, named Richard Swift, was found with a fractured skull and a shattered leg, and although alive when rescued, he died within a couple of hours. Two men named William Gibson and John Gray, were conveyed to the Infirmar suffering from rather serious injuries, to which they both eventuall succumbed. Several other men were so badly hurt that they had to b detained either in the Borough Hospital or the neighbouring Fre Providence Hospital. In addition it would appear that eight person are lying more or less injured in these two institutions. Others who were hurt by falling *débris* were sent to their homes after having their wounds dressed. Immediately after the explosion the Company's office in Liverpool was communicated with, and early in the afternoon Mr. Brock, chairman of the concern, with Sir David Gamble, Mr. J. C. Gamble, and other directors, were upon the scene of the accident directing operations.

Jordan & Metcalfe, Photographers] FIG. B. [*St. Helens.*

THE CAUSE OF THE EXPLOSION

has been explained by many theories, but it is not easy to reconcile many of them with the results, and the disposition of the ruins of the chlorate store. The grinding mills have escaped with almost as little damage as the chimney. The boilers (contrary to rumour) did *not* explode, and are both sound, as may be seen from Fig. B. That the

centre of the explosion was the end of the store nearest the crystallizers, where the fire broke out (Fig. A), is evidenced by the wreckage and the depression in the ground seen to the left of Fig. B; the grinding house at the other end of the store being the only part of the plant which remains reasonably intact (view No. 1), with the exception of the boilers.

The suggestion of the sudden evolution of oxygen from chlorate in a confined space is discounted by the roof of the store having been partly destroyed by fire at the outset. A more feasible explanation is, that directly much oxygen was evolved the abundance of heated and charred organic matter (casks, timber, etc.) burnt so rapidly and violently, and in such a short space of time as to cause an explosion; for the difference between combustion and an explosion is only a matter of degree in regard to the rapidity of the combustion. Another likely explanation has been made by Mr. J. Bower, of the New Explosives Co, to the effect that the burning timber would produce large volumes of heated smoke, which would become diffused throughout the building. The chlorate of potash would in turn become heated, and give off large volumes of pure oxygen gas, which by admixture with the hydro-carbons, and carbon contained in the smoke, would produce a terribly explosive mixture. It must not be forgotten that chlorate of potash *alone* is not explosive, and tons of it, as fresh as the day it was made, lie around the site of the store, which would not be the case with a genuine *explosive* such as gunpowder or guncotton.

But as regards finality on this point little progress can be made since most of the premises of argument are conjectural, because many points of fact cannot be discussed or made public until the adjourned inquest has been held on Tuesday, 30th inst. Till then it is wisest and fairest to suspend comment. The *Journal* will be represented at this inquiry, and a careful and detailed report of the proceedings will appear in our issue of June 3rd.

On Monday the inquest was formally opened and then adjourned to the date just mentioned, after which the jury, accompanied by Mr. Stewart, the general district manager, Mr. Rudge, the manager of the works, and Inspector Hunter and Sergeant Sisson, visited the whole of the works affected by the explosion. Mr. Stewart and Mr. Rudge carried out several experiments, such as trying to explode the chlorate by concussion, and then by fire.

By the afternoon of Monday the wreckage from the Hardshaw Brook works in Warrington New-road had been cleared away after two days' hard and trying work, made extremely difficult by the presence of so much vitriol. Workmen were also busy in making safe the houses rendered especially dangerous, but in the great majority of the cases the windowless houses still remained boarded up. During Sunday the neighbourhood of the works was visited by thousands of people from the surrounding towns and villages.

Colonel Ford, the chief explosive inspector for the Home Office, also visited St. Helens on Monday morning for the purpose of making an inspection of the scene of the disaster. Colonel Ford had an interview with Mr. Brighouse, the county coroner. Colonel Ford stated that if necessary he will bring Dr. Dupré, analytical expert, to attend the full inquiry. The funeral of Mr. Faram took place on Monday afternoon, and was attended by a very large number of representatives of the Conservative Club and other institutions. The route to the cemetery was lined by crowds of people, and "In Memoriam" cards were freely sold round the district in aid of the relatives of the deceased workmen.

GOLD OUTPUT IN THE RAND.

THE output from the Witwatersrand district during April (in bullion ounces), as cabled by the Chamber of Mines of the South African Republic, amounts to 439,111 oz., as against 441,578 oz. for March, and 335,125 oz. for the corresponding month of 1898. From the outside districts 21,238 oz. are reported, as against 22,458 oz. for March, and 18,118 oz. for the corresponding month last year. The total return, therefore, made to the Chamber amounts to 460,349 oz., as compared with 464,036 oz. for the previous month, a decrease of 3,687 oz. The following are the monthly returns from the Rand district alone since the beginning of 1895:—

	1895.	1896.	1897.	1898.	1899.
	oz.	oz.	oz.	oz.	oz
January	177,463	148,178	209,832	313,826	410,145
February	169,295	167,018	211,000	297,975	404,335
March	184,945	173,952	232,067	325,907	441,578
April	186,323	176,707	235,698	335,125	439,111
May	194,580	195,008	248,305	344,160	—
June	200,941	193,640	251,529	344,670	—
July	199,453	203,873	242,479	359,343	—
August	203,573	213,418	259,603	376,911	—
September	194,764	202,561	262,150	384,080	—
October	192,652	199,889	274,175	400,791	—
November	195,218	201,113	297,124	393,310	—
December	178,428	206,517	310,712	419,504	—
Total	2,277,635	2,281,874	3,034,674	4,295,602	1,695,169

Reports of Companies.

BELL'S ASBESTOS COMPANY, LTD.

The directors of this company recommend the payment of a dividend of 4 per cent. out of the profits of 1898, to place £500. to machinery reserve, and to carry forward a balance of £2,073.

SANTA RITA NITRATE CO., LTD.

The accounts of the Santa Rita Nitrate Company for the year 1898 show a profit, after providing for debenture interest and general charges, of £3,938., including the amount brought forward from the previous year, and deducting the interim dividend of 2s. 6d. per share paid in October last, which absorbed £2,407., the total to credit of profit and loss account is £9,352. Provision has to be made for amortisation of debentures falling due on July 1, amounting to £3,865., which will leave £5,487. to be carried forward to next account.

OAKBANK OIL CO., LTD.

The report by the directors of the Oakbank Oil Company for the year ended 31st March states:—The amount at the credit of profit and loss account, including the sum of £1,638. 8s. 4d. brought forward from previous year, is £12,691. 10s., which the directors recommend should be disposed of as follows:—£3,375. in payment of a dividend (free of income tax) at the rate of 5 per cent. on the paid-up capital of the company, payable on 24th May, 1899; £7,500. to be added to retorts renewal fund; £1,816. 10s. balance to be carried forward—£12,691. 10s. There has been an increase during the year in the realised value of the company's products. In the case of solid paraffin the increase has been marked, and would lead to the conclusion that for the first time since its introduction the world's consumption of solid paraffin has overtaken the production. Sulphate of ammonia realised fully £1. per ton over the price of previous year, and gives promise of realising a still higher price during the present year. The benefit from increased prices has been largely neutralised by the higher cost of labour and fuel; and the favourable result of the year's working is due in great part to the saving effected by the improved plant in the retorting department. The continued satisfactory experience of the new retorts, of which a bench capable of retorting 200 tons of shale per day was started in January, 1898, led the directors to decide to substitute as rapidly as possible the whole of the existing older retorts by those of the newer form. The work of carrying this substitution into effect is already well in hand, and will, it is expected, be completed by August of the present year. The cost is estimated at £12,000. This heavy expenditure is justified by the results of the past year, and should be defrayed within a period of two years by the increased profits from the improved plant, while admitting of the payment of a dividend to the shareholders. The directors who retire by rotation are Messrs. Easton and Jones. Both are eligible for re-election, and willing to act if elected. The auditor falls to be appointed at this meeting, and Mr. John Wilson, C.A., offers himself for re-election.

ALUMINIUM COMPANY LTD.

REDUCING THE CAPITAL.

An extraordinary general meeting of the members of the Aluminium Company Ltd, was held last week at the Cannon Street Hotel, E.C., for the purpose of considering resolutions for the reduction of the capital of the company and for altering the articles of association so as to make the necessary modifications in the status of the "A" and "B" shareholders. Sir Henry Roscoe presided.

The Chairman said: In the unavoidable absence of Mr. Balfour, I have been called upon to take the chair at this meeting, which, as you all understand, is an extraordinary general meeting of the company, called for the special purpose of considering the resolutions which you have just heard read. The papers explaining the proposal have been submitted to all the shareholders, and I do not think it necessary for me to do more than say a few words with regard to the resolutions which I now have to move. You are aware that the company has now been at work for about twelve years, and that hitherto no dividend has been paid at all on the "B" shares. The present position of the company, I am glad to be able to say, is very satisfactory both as regards the amount of trade we have been doing in the past, and as regards our prospects for the future. (Hear, hear.) The result of the trading this year has been to give a considerable probability that the "B" shares will receive a dividend presently under the old regime, subject, of course, to the question of reserve and depreciation, which in a company such as ours is one of importance, and requires grave consideration. (Hear, hear.) I may add that the proposed arrangement meets with the entire approval of the "B" shareholders. It is reasonably evident also that the proposed change will be to the benefit of the company and also of the "A" shareholders. It is evident, I think,

that the proposal of the directors is one that will commend itself to the shareholders present. Several of the largest shareholders had expressed their approval of it, and the directors hold proxies to a large amount. You will see from what is stated in the printed resolutions that the question has to be submitted to the court, and, subject to the decision thereto arrived at, I think we may all congratulate ourselves on the arrangement that has been come to. I do not know that I have any further remarks to make, but I shall be happy to answer any questions shareholders may wish to ask. I will now formally move the resolutions as follows :—

"(1) That the capital of the company be reduced by the sum of £15,000 , and that such reduction be effected by cancelling 15,000 of the 'B' shares, namely, those numbered 626 to 1,500, 1,576 to 1,800, 1,951 to 2,250, 2,326 to 2,500, 2,676 to 3,200, 3,226 to 3,300, 3,590 to 3,700, 3,716 to 3,760, 3,828 to 4,030, 4,123 to 5,202, 5,228 to 5,302, 5,974 to 7,460, 9,283 to 13,055, 13,523 to 17,316, 17,377 to 17,556, 17,607 to 18,655, 18,967 to 19.975, 19,982 to 20,000, all inclusive. And that, in consideration of the holders of the 'B' shares consenting to such cancellation, the remaining 5,000 'B' shares held by them be, from the time when such reduction is confirmed by the court, placed in a position of equality with the 'A' shares as regards dividends and distribution of assets in winding up, and that the articles of association be altered accordingly, and that such remaining shares be renumbered from 60,001 to 65,000, and that the certificates relating thereto be given up to be cancelled, and that fresh certificates be issued in lieu thereof. (2) That the articles of association of the company be altered by adding thereto, immediately after Clause 158, a new clause as follows: -(159) When and so soon as the reduction of the company's capital by cancelling 15,000 of the 'B' shares resolved on in the year 1899 shall have been confirmed by the court, the following provisions shall have effect, that is to say:—(1) The clause which, by special resolution passed and confirmed in August, 1888, was substituted for the former clauses, 5, 8, 9, 10, 11, and 12, shall cease to operate. (2) Clause 7 shall be read as if it were expressed in the terms following :—'7. The capital of the company is £65,000 , divided into 60,000 "A" shares of £1 each, and 5,000 "B" shares of £1 each, and all the said shares, both "A" and "B," shall confer on the holders the right, pari passu, to a fixed cumulative preferential dividend at the rate of 15 per cent. per annum on the capital for the time being paid up thereon, and the right to the whole of the surplus profits of each year which it shall be determined from time to time to divide, and which shall remain after paying a dividend on the other shares (if any) at the rate for the time being attached thereto by the conditions of issue, not exceeding the rate of 10 per cent. per annum on the capital for the time being paid up thereon.' (3) Clause 93 shall be read as if the figures 15 were substituted therein for the figure 5."

Lieut.-General Sir Andrew Clarke seconded the motion.

A Shareholder asked if the £15,000. by which the capital was to be written down would go in reduction of the amount at which the plant and patent account stood in the balance-sheet.

The Chairman : Yes ; you will see that in the balance-sheet last year that item stands at £69,000. It will now be reduced by £15,000.

The resolutions were then put by the Chairman, and carried unanimously.

A separate general meeting of the holders of "A" shares of the company was afterwards held for the purpose of considering an extraordinary resolution sanctioning the modifications of the rights and privileges attached to the "A" shares proposed to be affected by the resolutions just adopted —Sir Henry Roscoe again presided, and formally moved the necessary resolution, which was identical with the first of the resolutions carried at the previous meeting.

Mr. Twigg asked whether the court would be asked merely to sanction the reduction of capital, and would not enter into the other question of the modification of the rights of the "A" shareholders.

The Solicitor said that the question which had to be submitted to the court was as to the reduction of capital.

In answer to a further question, the Solicitor said that the modification of the rights of the shareholders could be made by the company itself under the powers of its articles of association, and the sanction of the court would not necessarily be required ; but, as he had said, no doubt the whole proposal would go before the court.

The resolution was then put and unanimously agreed to.

THE HOME OF THE M.I.M.E.—The new building of the Institution of Mechanical Engineers, close to St. James's Park, London, will be opened on Tuesday next. The Institution, says a correspondent, was founded over fifty years ago after a friendly meeting of engineers at the house of Mr. Beyer, in Cecil-street, Manchester. The rules were adopted on the motion of George Stephenson, seconded by Mr. Beyer, the former being elected president, and the latter a vice-president. At that time the number of members was 107 and the income £515. Last year the membership was 2,680 and the income, £8,496., with an invested capital of £37,947.

Trade Notes.

BRUNNER, MOND'S DIVIDEND.—A meeting of the directors of Messrs. Brunner, Mond, and Co., Ltd., was held on Monday, Sir John Brunner presiding. It was resolved to declare a dividend of 30 per cent. for the year on the ordinary shares, which is an increase of 5 per cent. on the previous year, to pay 7 per cent. on the preference shares, and to carry forward £111,000., which is an increase of £30,000

THE COAL STRIKE IN BELGIUM.—In consequence of meetings held by the Councils of Industry and Labour, at which a 5 per cent. increase of wages was conceded to the miners, the strike is now virtually at an end in this district. More than half the strikers have resumed. The strikers began by demanding an increase of 20 per cent.

SULPHIDE ORE CARGOES —In connection with the sulphide ore trade now opening on the Ship Canal, three sailing vessels are fixed for the port direct The Clan Macfarlane, 1,446 net tons, sailed on May 13 from Port Pirie with a full cargo. The Adolph Harboe and the Imberhorne are also bringing full quantities. The new smelting works in course of erection at Ellesmere Port are practically ready for dealing with this trade, and there is every indication of an extensive business in sulphide ore being developed here.

A STUDENT'S BUSINESS CAREER.—At the Salford County Court on Monday, His Honour Judge Parry heard an application by Mr. Hockin on behalf of Walter Broxap, a bankrupt, for his discharge from bankruptcy. The statement to the court was that Broxap, who is quite a young man, was formerly a student at Owens College, and he desired to take up some employment. He became connected with the Dinting Soap Manufacturing Company, and worked for it as an analytical chemist without receiving any salary. Eventually there was an arrangement that he should receive a salary ranging from 25s. to 30s. a week, the condition being that he should take up 100 of the company's £10. shares and pay £5 upon them. The bankrupt being then under age the shares were taken up by his father, it being understood that no further call should be made. When the bankrupt became 21 his father transferred the shares to him. Five calls of £1. per share were made, and the first two the bankrupt paid with the assistance of his father, but the others he failed to pay on account of want of means. The company went into liquidation, and judgment was obtained against the bankrupt for £300., the amount of the unpaid calls, £33. 15s. 4d. for interest, and £5 5s. for taxed costs. The Official Receiver (Mr. C. J. Dibb) supplemented the above statement with the observation that the conduct of the bankrupt had been satisfactory. Mr. Westbrook, who appeared on behalf of the liquidator, said it was desired that the unpaid calls should be obtained, and in reply to His Honour he said it was immaterial whether the amount was obtained from the bankrupt or his father. His Honour said it seemed to him that that rather had the appearance of blackmailing. The bankrupt had no money, and it would be wrong to suspend an order for discharge in the hope that the father might be persuaded to go to his help. The bankrupt had been a studious and hard-working person, and for his position he was not really to blame. The case, he thought, was one of those contemplated by the Act of Parliament wherein exceptions were made, and the discharge would therefore be granted forthwith.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols do not seem to show much improvement even at 6¾d. to 7d. for 90's and 7¼d. for 50/90's, and with a prospect of a still greater increase in production it is hazardous to say that 6¾d. is rock-bottom price. Carbolic acids are steady and unchanged, with a good demand. Naphthas are quiet, without alteration in prices. Tar is rather better owing to the strong position of pitch and tar oils, the former still being quoted 27s. 6d. f.o.b. East Coast, and 25s. West Coast.

Sulphate of ammonia is very firm. The demand for prompt is steady, while for forward buyers are displaying considerable anxiety to conclude sales at £12. 5s., or thereabouts, up to the end of December. For prompt, Beckton quotation has been withdrawn. London outside makes are quoted £12. 10s. to £12. 12s. 6d. ; Hull, £12. 7s. 6d. and Leith, £12. 10s.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade, business on the whole continues brisk, and works are fully engaged both for home and export trade. For bleaching powder there is an active demand, though quotations are unaltered at £4. 17s 6d. to £5., hardwoods, f.o.b. Liverpool, and for home trade

£4. 2s. 6d. to £4. 5s. per ton, softwoods, f.o.r. makers' works. Chlorates of potash and soda are unchanged at 3½d. and 3¾d. per lb. respectively. For caustic soda the demand is rather quieter, but values remain as for some time past, viz., f.o.b. Liverpool:—77%, £7. 12s 6d; 74%, £7. 7s. 6d.; 70%, £7; 60%, £6. nett per ton Ammonia alkali, 58%, firm at £3. 17s. 6d., bags, f.o.r. Soda crystals and bicarbonate are steady. Sulphate of copper firmly maintained at £26. 10s. f.o.b. prompt, and £26. 15s. for June delivery. Saltcake, 26s. to 27s. per ton, in bulk, f.o.r. Sulphur, £4. 12s. 6d. per ton. Nitrate of soda rather easier for spot and forward delivery. Potash, caustic and carbonate, are moving freely and prices are firm. Brown acetate of lime, £4. 17s. 6d. to £5, c.i.f.; grey, scarce and dearer at £8 to £8. 5s. per ton. White sugar of lead dull at £24. per ton; other lead salts firm. Acetate of soda steady at £12. 15s. to £13 per ton. Borax is firm at £16. per ton. Yellow prussiate of potash has advanced to 8¼d. per lb., and supplies are very scarce. Prussiate of soda, 6½d. per lb. Cyanide, 1s. 1d. to 1s. 2d. per lb. Sulphocyanides dull. For white powdered arsenic, best brands, higher prices are now being paid, and to-day's value is £19. Garston, etc. Zinc and tin salts have a higher tendency. Aniline oil and salt still offer at low prices. Ammonia salts are dearer all round. Carbonate advanced to 3¼d. per lb. Muriate irregular at £18. 15s to £19. per ton. Sulphate of iron is in better general inquiry and higher prices are obtained. Bichromates are unchanged in position and value.

REPORT ON MANURE MATERIAL.

The market for mineral phosphates has been rather quiet, but sellers are everywhere very firm, and prices tend rather to harden than otherwise. The bulk of the 77/80% Florida rock for 1900 shipment is now sold, and a considerable business has also been done for 1901 shipment. Tennessee rock is rather pressed upon the market, and although the quotations are 7¼d. to 7½d. per unit, it is probable that less than this would be accepted for summer-autumn shipment. Sellers of South Carolina rock are firm at 6½d. per unit, and for 1899 shipment 7d. per unit is now required for 58/63% Algerian. Common bones are more freely offered, and the closing value is £4. 7s 6d. to £4. 10s. per ton, ex quay Liverpool, according to quality. Supplies of East Indian bone meal are very scarce, and from store £5. 3s. 9d. per ton is required. Nitrate of soda again rather firmer on spot—8s. 1½d. per cwt. being the quotation for fine quality.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

OILS.—Palm oil shows more signs of activity, and full to advancing prices have been paid, but the extent of the transactions has not transpired. Olive is firm in price, supplies being small, while the inquiry is fairly active. Linseed steady at 19s. 6d. to 20s. cwt. for Liverpool makes in export casks. Cottonseed keeps firm at 17s. to 17s. 6d. cwt. for Liverpool refined. Castor oil is slow of sale, buyers being scarce and chary; sellers, however, still quote 2⅞d. for good seconds Calcutta, and 2 11/16d. to 2¾d. for first pressure French. Tallow is very firm, sellers in all positions being slow to operate except at full values; sales generally have improved about 3d. for beef and 6d. for mutton. Resin keeps in moderate demand at 4s. to 4s. 3d. for common, 4s. 6d. to 5s. 6d. medium, and 6s. to 8s. fine. Spirits of turpentine are selling satisfactorily on spot at 35s. 9d. Petroleum is in better demand, with American 6d. to 7¼d., and Russian refined, 5⅜d. to 5¾d.

CAKES.—American Western linseed on the spot are steady, and an improved inquiry is experienced at £5. 17s. 6d. to £6. 7s. 6d. Other imported descriptions were without material alteration, with £6. 10s. to £6. 15s. still quoted for River Plate, £7. 5s. for Russian, and £7. to £7. 2s. 6d. per ton for Bombay, with business doing in recent arrivals of the latter within the quotations. Liverpool makes continue steady at £7. 5s. to £8 per ton, according to brand, with moderate consumptive sales making thereat. Good to choice brands of American decorticated cottonseed are a shade firmer in tone, with fair sales passing at £5. 12s. 6d. up to £6 2s. 6d., according to quality, being a slight advance on recent rates for choice; whilst Liverpool makes continue in only quiet request at £6. 2s. 6d. to £6. 10s. per ton, according to brand. A fair consumptive inquiry has been experienced for Liverpool undecorticated makes at former currencies, viz, £4. 15s. to £5. 5s., according to brand,; whilst Egyptian rule rather firmer, with slightly more doing, and £4. per ton is now asked for spot parcels

COLOURS.—Prices are steady, and practically without change. Ochres: Oxfordshire—common £10., medium £12., best £15; Derbyshire—common 40s., medium 50s., best 60s.; Welsh—best 91s. seconds 50s, and common 18s.; Devonshire, 40s. to 45s.; French, J C, 65s. Umber: 40s. to 45s. White lead: £16. Red lead unchanged. Venetian red: £6. to £10. Cobalt: Prepared oxide, 9s 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7., medium, £10.; finest, £20.; Zinc oxide: £22. 10s. to £25.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—The markets show some improvement in values, especially linseed oil, which has advanced £1 per ton upon the week and remains firm It may be interesting to record here some of the exports from Hull to the United States for quarter ending March 31st. Black lead £228.; bleaching powder, £1,147; chemicals, £345.; colour £270.; creosote, £2,483.; dyestuffs, £58.; glue, £170.; grease £104.; hides and skins, £36,183.; linseed oil, £157.; rapeseed oil £2,180.; old rape, £1,225.; oxide, £284.; paint, £136.; washing blue, £2,951. Linseed oil is firm at 18s. spot, naked; 17s. 6d. June August; 16s 6d. last four months; boiled and refined, £1. to £1. 10 per ton extra. Cotton oil, crude, 14s. 3d. spot; 14s. 4½d. June August; refined, 15s. 6d spot, naked; 15s. 7½d. June to August, and steady thereat; casks, £1., and barrels, £1. 10s. extra. Castor oil extracted here, cold drawn pharmaceutical, in barrels, 28s. per cwt.; cases, 3 3/16d. per lb.; pure first pressure, in barrels, 25s.; in cases, 3⅜d. per lb; seconds, 25s. in barrels; 2 13/16d. per lb. in cases. Resin unchanged. Olive oil, values unchanged, from £32. per tun. Olive oil soap from £15. per ton to £17. per ton, ex quay to arrive. Cod oil, £16 to £18. per ton. Wool grease unchanged. Turpentine continues to realise extreme prices. Oleines unchanged from £18. 10s. to £21. per ton. Home melted tallow from £23. Mineral oils are in fair request, values unchanged. American pail lard, 29s. to 30s.

CAKES—Linseed cakes firm, but quiet demand: 95% pure, £7. 2s. 6d. to £7. 7s. 6d. per ton. Oilcakes, £6. 5s. to £6. 7s. 6d. per ton. Russians, £6. 12s. 6d. to £7. 2s. 6d. Cotton cakes very firm, best makes, £5. 2s. 6d. to £5. 5s.; seconds, £4. 17s. 6d. to £5; decorticated, £6. 5s. to £6. 10s.; meal, £5. 17s. 6d. to £6. Rape cakes Black Sea, £4. 2s. 6d. per ton.

PAINTS.—The present strike in the building trade affects the demand to some extent. Some firms here, however, are extending their operations to London in order to meet competition. Prices all round are unchanged.

TYNE CHEMICAL REPORT.

TUESDAY.

Chemicals show very little alteration in prices. Shipments continue to be fairly good. Soda crystals are steady at £2. 12s. 6d. per ton, gross weight, locally. Caustic, 70%, £7., and 76/77% £8. per ton. Sulphur steady at £4. 15s. per ton.

Bleaching powder, softs, £5. 5s. per ton, nett; do., hards, £5. 10s. per ton, nett; caustic soda: 76/77% £8., and 70% £7. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48% £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75°Tw., £2. 12s. 6d. per ton, nett; do., 100°Tw., £3. per ton, nett; do., 140°Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. od. per ton, nett; blanc fixe, £6. 10s. per ton nett; chloride of barium, refined crystals, £6. 15s. od. per ton. nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt unchanged. Price is firm at 9s.6d. per ton, f.o.b. Tees.

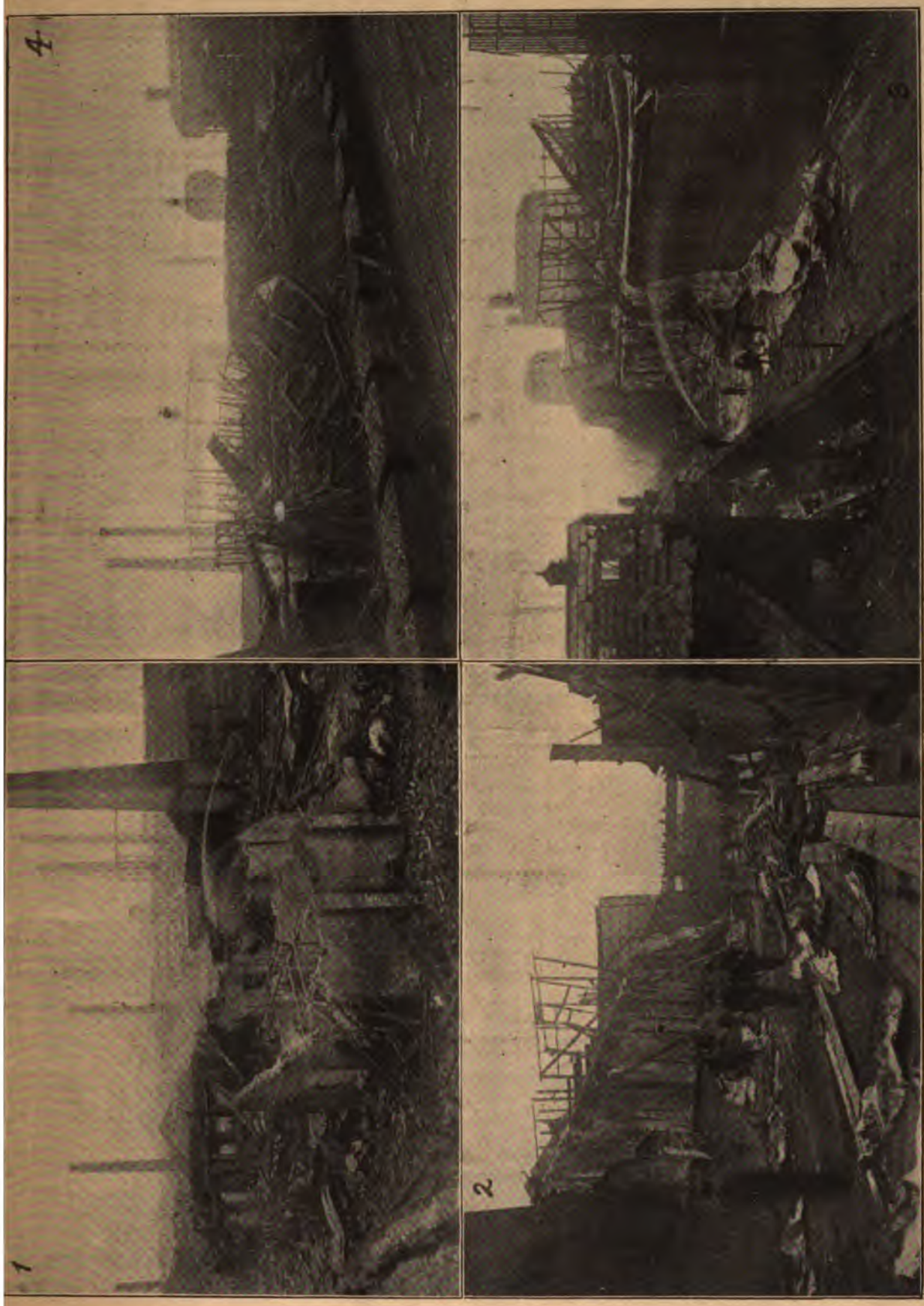
COALS.—Trade continues good, and there is a fair demand for most qualities. Household coals are rather duller, as is usual at this time of the year. In coke the scarcity continues, and price is firm at about 25s. per ton, f.o.b. Best Northumbrian steam, 12s. 6d. to 13s. per ton; second qualities, 11s. 6d. to 12s. per ton; small steam, 6s. 6d. to 7s. per ton; bunker coals, 9s. 6d. to 10s. per ton; household coals, 10s. to 11s. per ton; coke, 25s. per ton.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

The great scarcity of sulphate of ammonia continues as a special feature on the market, and prompt value f.o.b. Leith has made a further advance, £12 5s. having been paid before the close of last week. One parcel fetched even higher than that, but having been a sample of special quality it does not count in the ordinary reckoning. Operators are in the conviction at present that there is to be a further mount, and it is questioned whether there is any seller to-day at last Saturday's price. In the general market for chemicals the late comparative firmness is retained, but there are no advances. Sulphate of copper is steady at last week's figure. Oils and paraffins are unchanged.

Chief prices current are:—Soda crystals, £2. 5s. to £2. 7s. 6d. basis nett, Tyne; soda ash, £4. 2s. 6d. to £4. 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 5s. to £4. 15s. nett, Glasgow; caustic soda, white, 74° £7. 7s. 6d., 70/72°



[St. Helens.

THE ST. HELENS DISASTER.—(See page 330).

Jordan & Metcalfe, Photographers.]

£7., 60/62° £6., and cream 60/62° £6., all nett, Liverpool; bleaching powder, 35/37°, £5. 5s. to £5. 10s. nett, Tyne; saltcake, 28s.; borax, English refined, £16., and boracic acid, £26. nett, Glasgow; bicarbonate of soda, 5-cwt casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s., nett, Liverpool; bichromate of potash, 3½d., less 6% for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d., less 6% for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow); chlorate of potash, 3⅝d, less 5% Liverpool; nitrate of soda, 8s. 3d.; sulphate of ammonia, £12. 5s. to £12. 6s. 3d. prompt, f.o.b. Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £26. 10s., less 5% Liverpool; paraffin scale, hard, 1⅞d. to 2d. per lb., and soft 2d. per lb.; paraffin wax, 120° semi-refined, 2¼d. to 2½d. per lb.; paraffin spirit (naphtha), 9d. to 9½d. per gal; paraffin oil (burning), No. 1, 6¼d.; and crystal, 6¾d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 15s. to £5. 5s., 885° £5. 10s. to £6., and 890/895° £6. 5s. to £6. 10s. Week's imports of sugar at Greenock were 145 casks and 12,816 bags, beet, unrefined.

New Companies.

Clippen's Lime Co., Ltd.—CAPITAL £5,000. This company has been formed to acquire and carry on the lime business of the Clippens Oil Company, Ltd.

British Spirit Process, Ltd.—CAPITAL £18,000., in £1. shares. This company has been formed to acquire, develop, and turn to account Patent No. 11,638, of June 21st, 1892, "Improvements in treating or ageing spirits." The subscribers to the memorandum of assocaition are:—B. Crook, 44, Albany-road, Liverpool, clerk; D. L. Chalmers, 5, Fenwick-street, Liverpool, chartered accountant; W. N. Turner, 19, Fenwick-street, Liverpool, printer; R. Turner, 5, Parkfield-road, Liverpool, printer; A. Gilmour, 7, Lancaster-road, Birkdale, printer; R. Morgan, 92, Aubrey-street, Liverpool, bookkeeper; R. Macduff, 30, Lord-street, Liverpool, advertising contractor.

Chemical Oil Syndicate, Ltd.—CAPITAL £35,000, in £1. shares. This company has been formed to manufacture, sell, refine, and deal in petroleum or other mineral oils and the products thereof, and to carry on the business of chemists, engineers, mine owners, merchants, etc. The subscribers to the memorandum of association are:—M. Pickett, Priory Cottage, West Molesey, gentleman; J. Lynch, M.D., Talbot Mansions, Museum-street, W.C.; J. Hulse, 34, Hugon-road, Fulham, printer; J. Sullivan, 38, St. John's Hill-grove, New Wandsworth, printer; H. T. Edwards, 66, Balderton Buildings, Grosvenor-square, W., printer; W. H. Bennett, 172, Clarence-road, N.W., gentleman; R. J. Mackrill, 18, Crofton-road, Camberwell, compositor.

Berca Petroleum Co., Ltd.—CAPITAL £150,000., in £1. shares. This company has been formed to acquire any lands, grants, and rights in Roumania or elsewhere, to search for, get and win petroleum and all kinds of oil and their products, and to adopt an agreement with the Copthall Development Syndicate, Ltd. The subscribers to the memorandum of association are:—C. A. Frith, 66, Brooke-road, Stoke Newington, N., secretary; J. Steventon, 90, Myddleton-road, Hornsey, N., clerk; J. O. Cave, 47, St. Paul's-road, Canonbury, N., clerk; J. A. Condell, 5, Kitto-road, Nunhead, S.E., clerk; C. W. E. Ward, 31, Thornhill-road, Barnsbury, N., clerk; F. H. Spragg, 74, Ambler-road, Finsbury Park, N., clerk; C. F. Aldridge, 149, Leadenhall-street, E.C., clerk.

Anglo-Russian Wood Distillation and Chemical Products Co., Ltd.—CAPITAL £1,000,000, in £1. shares. This company has been formed to adopt an agreement with Count Ladislas Zbyszewski, to carry on in Russia the business of drying malt and residues from breweries, and residues from sugar works, and utilising the same for cattle food, and to carbonise and distil wood, peat, coal, etc. The subscribers to the memorandum of association are:—A. J. Swan, 20, Marsden-road E., Dulwich, S.E., gentleman; F. Wallace, 27, Ayliffe-street, S.E., gentleman; A. D. Brown, 31, Reighton-road, Upper Clapton, writer; E. Wyatt, Bangor House, Lausanne-road, Hornsey, gentleman; E. T. Church, 34, Geneva-road, Brixton, S.W., clerk; H. W. Brown, 59, Mackenzie-road, Beckenham, journalist; F. H. Goodwin, 27, Dynevor-road, Stoke Newington, clerk.

British Sulphides Smelting Co., Ltd.—CAPITAL £500,000., in £1. shares. This company has been formed to acquire from the Sulphides Reduction (New Process), Ltd., the British patents for certain inventions for the treatment of complex sulphur ores, and to carry on the business of miners, quarrymen, smelters, refiners, ore crushers, metallurgists, etc. The subscribers to the memorandum of association are:—J. B. W. Maunder, Broad-street House, E.C., merchant; D. H. Wilson, Mansion House Chambers, E.C., barrister; E. W. D. Longden, 31, Nightingale-lane, S.W., mining engineer; G. W. Cooper, 10, Hyde-park Mansions, W., architect; A. Caillat, Broad-street House, E.C., accountant; W. Russell, 107, Woodland Park-road, N., clerk; C. H. Sharp, 83, Lansdowne-road, Notting Hill, W., clerk. Registered office, Broad-street House, E.C.

IMPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.
Week ending May 6th.

Acetate of Lime—

U. States,	307 pks.	Lister & Biggs

Acetone—

Germany,	9 pks.	H. Lorenz
,,	10	D. T. Domeier & Co.

Alkali—

Holland,	50 t.	J. Owen
France,	8	J. Harrison
,,	8	P. Hecker & Co.
Belgium,	10	F. Smith

Alum—

Holland,	688 pks.	J. White

Ammonium Oxalate—

Holland,	£30	F. Boehm

Antimony Ore—

Australia,	10 t.	Greenhough & Son
France,	40	H. Grey, Junr.

Barium Sulphate—

Belgium,	2 pks.	Leach & Co.

Barytes—

Germany,	100 pks.	W. T. Henley's Tel. Wks. Co.
Holland,	57	Wilkinson, Heywood & Co.
Germany,	22	W. Harrison & Co.
,,	43	H. Lambert

Bones—

Sydney,	41 t.	Hicks, Nash, & Co.
Melbourne,	3	,,
,,	25	Culverwell, Brooks & Co.
France,	3	Lon. & Til Ltge. C. & D. Co., Ld.

Bromine—

Germany,	20 pks.	A. & M. Zimmermann

Caoutchouc—

Thursday I.,	8 c.	S. Figgis & Co.
Straits,	375	Gilman Brs & Co.
,,	102	L. & I. D. Jt. Co.
Colon,	120	Prop. Bull Wf.
E. Indies,	10	L. & I. D. Jt. Co.
Zanzibar,	93	,,
Colon,	6	S. Figgis & Co.
Germany,	3	Major & Field
R. Colombia,	9	,,
France,	92	H. Johnson & Sons
Straits,	212	E. Boustead & Co
,,	50	Anderson, Weber & Smith
Rangoon,	10	Prop. Hay's Wf.
Belgium,	5	Union L. Co., Ld.
Rangoon,	37	L. & I. D. Jt. Co.
,,	47	G. S. N. Co.
Ceylon,	189	Eastern P. & E. Co.
Ibo,	6	Clarke & Smith
E. Indies,	21	Butler's Wf., Ld.
Straits,	60	W. Pope & Co.
Colon,	4	Chalmers, Guthrie & Co.
U. States,	3	Hoare, Wilson & Co.

Castor Oil—

Italy,	25 cs.	Barron, Harveys & Co.
,,	10	L. & I. D. Jt. Co.
France,	27 brls.	Mordaunt Brs.
Belgium,	40	Sawer, Sons & Co.
,,	40	Humphrey & Co.
Italy,	10 cs.	J. Knill & Co.
E Indies,	25	Dalton & Young
Italy,	5 brls.	A. Laming & Co.
France,	16 cks.	J. Greig

Caustic Potash—

Germany,	73 pks.	J. M. Steel & Co.
,,	15	South Devon Wf. Co.
France,	4	A. C. Hitchcock

Chemicals (*otherwise undescribed*)

Holland,	£18	T. H. Lee
Germany,	400	Craven & Co.
,,	412	L. & I. D. Jt. Co.
Holland,	30	R. W. Greeff & Co.
Germany,	12	J. Norrenberg & Co.
Holland,	60	Hernu Peron & Co.
Belgium,	15	T. Ronaldson & Co.
Germany	30	Argo S. S. Co.
Holland,	41	A. & M. Zimmermann
Italy,	9	Houlder Brs.
Belgium,	850	T. H. Lee
,,	53	John Cockerill Line
U. States,	435	B. & F. Wf. Co., Ld.
Germany,	746	A. & M. Zimmermann
France,	10	Petri Brs.
Holland,	540	H. Harkness
,,	5	A. E. Piggott
Germany,	23	Butler's Wf., Ld.
,,	12	R. W. Greeff & Co.

Citric Acid—

Germany,	40 pks.	A. & M. Zimmermann

Coal Products—
Carbolic Acid

Germany,	25 pks.	— Baumann

Cream of Tartar—

France,	5 pks.	B. & F. Wf. Co., Ld.

Disinfectants—

Germany,	£30	A. & M. Zimmermann

Dyestuffs—
Alizarine

Holland,	1 pk.	G. S. N. Co.

Argols

Canaries,	1 pk.	L. & I. D. Jt. Co.

Cochineal

Canaries,	7 pks.	Hendy & Martin

Cutch

Rangoon,	300 pks.	L. & I. D. Jt. Co.
,,	250	H. A. Litchfield & Co.
Straits,	20	Huttenbach & Co.
Rangoon,	217	A. Howden & Co.

Extracts

Denmark,	2 pks.	M. D. Co.
,,	4	Bailey & Leetham, Ld.
France,	50	L. J. Levinstein & Sons
,,	70	B. & F. Wf. Co. Ld.
Germany,	305	Fuerst Brs.
Denmark,	1	Masters Brs.

Indigo

E. Indies,	17 chts.	L. Archard & Co.
,,	27	Park Macfadyen & Co.
,,	5	arsons & Keith
,,	26	H. J. Perlbach & Co.
,,	5	Elkan & Co.
,,	40	L. & I. D. Jt. Co.
,,	26	H. Johnson & Sons
,,	18	F. Barschall & Co.
,,	11	Arbuthnot, Ewart & Co.
Belgium,	2 cs.	John Cockerill Line
Spain,	52	Alzamora Brs.
,,	35	Marine Insurance Co.
,,	3 snrs.	Balois Insurance Co.
Colon,	42	Chalmers Guthrie & Co.

Myrabolams

E. Indies,	683 pks.	W. Shelcott & Sons
,,	590	L. & I. D. Jt. Co.
,,	800	Hoare, Wilson & Co.
,,	683	Marshall & French
,,	1,370	Union L. Co., Ld.
,,	1,366	G. R. Haller, Ld.

Tanners' Bark

Natal,	49 t.	A. & W. Nesbitt
Germany,	25	,,
Belgium,	10	Leach & Co.
Adelaide,	93	,,
Natal,	50	Bullard, King & Co.
Cape,	40	W. France & Co.
Tasmania,	65	Dalgety & Co.
Melbourne,	15	Culverwell, Brooks & Co.

Tumeric

E. Indies,	22 pks.	Hoare, Wilson & Co.
,,	200	Prop. Bull Wf.
,,	152	Lucas & Spencer's Wf., Ld.

,, 40 Wallace Bros.
,, 100 L. & I. D. Jt. Co.
,, 185 Dalton & Young

Farina—
Italy, 55 pks. C. Tennant, Sons & Co.
France, 10 ,,
Italy, 170 City Coml. Wf., Ld.
U. States, 145 Wingate & Johnston
Holland, 50 J. Knill & Co.
France, 3 E. Flageollet, Parent & Co.
Holland, 200 R. Bennett & Co.
Germany, 700 ,,
,, 100 J. Barber & Co.

Glucose—
U. States, 6,000 pks. 7,617 c. R. G. Hall & Co.
France, 200 200 Perkins & Homer
,, 300 300 Trier, Meyer & Co.
,, 100 100 Prop. Fenning's Wf.
Germany, 100 100 Trier, Meyer & Co.
,, 35 281 Deering & Robotton
,, 13 106 M. D. Co.
U. States, 50 315 Deering & Robottom
,, 100 600 L. & I. D. Jt. Co.
,, 500 500 Pickford & Co.
,, 435 2,634 L. & Til. L. C. & D Co.
,, 500 500 Bellamy's Wf., Ld.
,, 1,000 1,000 C. Mangold & Co.
,, 600 1,100 Fellows, Morton & Co.
,, 750 750 Beck & Pollitzer

Glue—
Italy, £60 Butler's Wf., Ld.
Germany, 70 M. Dk. Co.
France, 34 J. Harrison
Germany, 176 L. & I. D. Jt. Co.
Holland, 12 Hernu, Peron & Co.
Belgium, 570 G. E. Banes
France, 1,450 T. M. Duche & Sons
Italy, 520 ,,
,, 30 Greenberg & Son
France, 145 Mory & Co.
Holland, 84 G. S. N. Co.
Germany, 203 Butler's Wf., Ld.
,, 42 Argo S. S. Co.
Belgium, 725 G. E. Bance
France, 500 Lon. & Til. Light C. & D. Co.

Glycerine—
Holland, £210 Phillips & Graves
Germany, 120 R. W. Greeff & Co.
,, 76 Butler's Wf., Ld.

Gutta Percha—
Straits, 471 t. 12 c. Gilman Brs. & Co.
,, 26 H. W. Jewsbury & Co.
Holland, 10 Netherlands Steamboat Co.

Lead Acetate—
France, £120 F. Smith

Manganese Borate—
Germany, £36 Petri Brs.

Manganese Ore—
Germany, 5 t. Becker & Wagner
,, 14 C. Hof & Co.

Manure—
Germany, 50 t. F. W. Berk & Co., Ld.
,, 30 Fuerst Brs.
E. Indies, 210 A. Hunter & Co.

Methyl Alcohol—
San Sebastian, 500 g. Lister & Biggs
U. States, 3,700 ,,
France, 1,100 ,,
,, 859 E. Catlin
Germany, 788 J. Norrenberg & Co.
,, 2,664 W. Iszard

Molasses—
U. States, 200 cks. 1,127 c. J. Forsey
450 2,458 Deering & Robottom
909 5,692 J. R. Francis & Co.
300 1,676 Falkenburg & Hesse
,, 50 267 Ohlenschlager Brs.

Ochre—
Spain, 100 pks. J. L. Lyon & Co.
France, 42 ,,
,, 204 W. Harrison & Co.
Holland, 13 Phillipps & Graves
U. States, 86 L. & I. D. Jt. Co.

Iron Oxide—
Germany, 3 pks. H. Lambert

Oxalic Acid—
Holland, 15 pks. R. W. Greeff & Co.

Paraffin Wax—
U. States, 527 cs. Anglo-American Oil Co.
,, 100 brls. H. Hill & Sons

Phosphates—
Bona, 1,300 t. A. Hunter & Co.
Belgium, 200 Anglo-Contl. Guano Works
W. Indies, 397 G. M. Bauer

Potash—
U. States, 10 t. 14 c. Charles & Fox
,, 2 19 S. Ward & Co.

Potassium Bromide—
Germany, 12 pks. R. W. Greeff & Co.

Potassium Carbonate—
Germany, 10 t. Procter Brs.
,, 1 R. W. Greeff & Co.

Potassium Muriate—
Germany, 508 pks. Bessler, Waechter, & Co.

Potassium Oxalate—
Holland, 20 pks. R. W. Greeff & Co.

Potassium Sulphate—
Germany, 508 pks. Bessler, Waechter, & Co.

Red Lead—
Holland, 7 pks. J. Owen
,, 123 Randall Brs.

Rosin—
U. States, 300 brls. Suter, Hartmann & Co.
Belgium, 100 Perkins & Homer

Salicylic Acid—
Germany, 22 pks. Butler's Wf., Ld.

Saltpetre—
Germany, 16 brls. L. & I. D. Jt. Co.
,, 63 cks. ,,
,, 210 bgs. H. Grey, junr.
,, 350 S. E. Rly Co.
E. Indies, 150 A. Hunter & Co.
Belgium, 85 J. Greig

Silver Nitrate—
Germany, £290 R. W. Greeff & Co.

Soap Stock—
U. States, 52 t. Wilson & Co.

Soda—
Holland, 140 t. R. Waters
,, 10 R. W. Greeff & Co.
,, 12 c. G. S. N. Co.

Soda Ash—
Holland, 68 t. R. Waters

Sodium Acetate—
Holland, 30 pks. E. Catlin

Sodium Bichromate—
Germany, 52 pks. A. G. Neale

Sodium Hypochlorite—
Holland, 100 pks. J. Owen
Germany, 323 H. Lambert

Sodium Prussiate—
Belgium, 29 pks. J. Owen

Starch—
U. States, 700 pks. C. Tennant, Sons, & Co.
,, 400 R. Bennett & Co.
,, 7,000 Union Ltge. Co., Ld.
,, 2,000 R. G. Hall & Co.
Germany, 6 Butler's Wf., Ld.
,, 350 Seaward Brs., Ld.
,, 165 Argo S. S. Co.
,, 2,501 Horne & Co.
Holland, 40 Hernu, Peron, & Co.
,, 2,157 Little & Johnston
,, 5 Phillipps & Graves
,, 233 G. S. N. Co.
Belgium, 96 Leach & Co.
,, 565 E. & T. Pink
,, 203 Becker & Wagner
,, 208 T. H. Lee
,, 720 T. Ronaldson & Co.
,, 240 J. Harrison
,, 100 C. Tennant, Sons, & Co.
France, 180 F. Claydon & Co.
,, 27 Sollas & Sons
,, 565 E. & T. Pink

Stearine—
France, 240 bgs. G. Boor & Co.
,, 281 H. Hill & Sons
Holland, 136 ,,
Belgium, 63 ,,
,, 50 J. Harrison
,, 88 W. H. Mitchell

Tallow—
Melbourne, 37 cks. Goad, Rigg, & Co.
,, 340 Elkan & Co.
,, 432 Phillipps & Graves
,, 6 Flack, Chandler, & Co.
Sydney, 28 Lon. & Til. Ltge. C. & D. Co.
,, 50 A. B. Curtis & Co.
N. Zealand, 2 Culverwell, Brooks, & Co.
,, 160 Phillipps & Graves
,, 1 J. Connell & Co., Ld.
River Plate, 300 Phillipps & Graves
Germany, 5 T. Oertell
E. Indies, 40 Culverwell, Brooks, & Co.
Queensland, 115 Dalgety & Co., Ld.
,, 25 cs. W. Laing
U. States, 730 trcs. C. S. Lovell

Tartaric Acid—
Holland, 15 pks. Kirkpatrick, Barr, & Co
France, 17 F. C. Devon & Co.

Ultramarine—
Holland, 2 pks. Phillipps & Graves
,, 4 W. Harrison & Co.
Belgium, 20 J. Harrison

Varnish—
U. States, 77 pks. Taylor Brs.
,, 45 Atlantic Transport Co.
France, 1 Mory & Co.
Belgium, 10 T. Ronaldson & Co.
Germany, 5 Brit. Anti-Fouling C. & P. Co.
,, 15 Butler's Wf., Ld.

White Lead—
Belgium, 109 pks. T. & W. Farmiloe, Ld.
,, 42 Burrell & Co.
,, 38 J. L. Lyon & Co.
Holland, 50 F. G. Clifford
,, 32 J. Owen
,, 30 Taylor Brs.
,, 107 W. Balchin, Ld.
,, 41 Randall Brs.
France, 16 Soundy & Sons

Wolfram Ore—
Australia, 21 t. Major & Field

Wood Pulp—
U. States, 35 pks. C. S. Lovell
,, 1,760 Henderson, Craig, & Co.
Norway, 320 G. Hagborg & Co.
,, 500 W. G. Taylor & Co., Ld.
,, 864 J. Sharp
,, 8 Christophersen, Andrews, & Co.
,, 120 Johnsen & Jorgensen
,, 400 W. E. Bott & Co.
Holland, 100 Robinson, Roberts & Co.
Germany, 91 C. S. Lovell
,, 12 Becker & Wagner
Sweden, 300 G. Hagborg & Co.
———, 500 Alsing & Co., Ld.
Canada, 79 Thames S. T. & L. Co., Ld.

Zinc Oxide—
Holland, 50 pks. Fellows, Morton, & Co.
,, 65 M. Ashby, Ld.

LIVERPOOL.

Week ending May 4th.

Antimony—
Antofagasta, 737 bgs. H. Watson
,, 306 A. Araymayo & Co.

Bone Ash—
Zarate, 78 bgs. J. Nelson & Sons, Ld.

Bones—
Valparaiso, 47 bgs.
Alexandria, 57 70 t.
Maranham, 3 bgs. Gunston, Sons & Co.

Borax—
Antofagasta, 4,682 sks. Pacific B. & R. C. Wks.

Castor Oil—
Leghorn, 6 cs.

Cobalt Ore—
Rouen, 4 cs. J. R. Francis & Co.

Colours—
Hamburg, 1 ck. 6 cs.
Rotterdam, 6
Stettin, 15 W. Slater

Cream of Tartar—
Bordeaux, 68 cks.

Dried Blood—
Zarate, 167 bgs. J. Nelson & Sons, Ld.

Dyestuffs—
Cutch
Rangoon, 1,520 bxs.
Singapore, 750
Extract
St. Nazaire, 310 cks.
Havre. 23
Myrabolams
Bombay, 660 bgs.
Orchella
San Francisco, 391 bls.

Dyewood Extract—
New York, 200 brls. McArthur & Co.
Philadelphia, 55

Farina—
Stettin, 10 bgs. W. Slater

Glucose—
Newport News, 200 brls.
New York, 200
Boston, 100 Colby & Co.
Baltimore, 1,500

Glue—
St. Nazaire, 13 cks.

Glue Stock—
Marseilles, 492 bls.

Iodine—
Valparaiso, 18 kgs. A. Gibbs & Sons

Limestone—
Rouen, 1 crt. J. R. Francis & Co.

Litharge—
Rotterdam, 15 cks.

Magnesite—
Kymassie, 1,650 t. Tennant & Co.

Manganese Ore—
Coquimbo 1,630 t. qty.

Manure—
B. Ayres, 324 bgs. Picasso & Co.

Mica (Pulp)—
New York, 12 brls. C. & J. G. Potter

Molasses—
Alexandria, 816 cks.

Ochre—
Rouen, 40 cks. J. R. Francis & Co.
Marseilles, 7
,, 30 Henderson & Rolls
Baltimore, 30 brls.

Paint—
Rotterdam, 1 cs. 2 dms.

Paraffin Wax—
New York, 1,004 brls. Thompson & Bedford
Baltimore, 100
Philadelphia, 100
Rangoon, 79 bgs.
Philadelphia, 300 bxs. Anglo-Am. Oil Co.

Rosin—
New York, 150 brls.

Soap—
Philadelphia, 2,000 bxs. Lever Brs., Ld.
Naples, 197 cs.
Rotterdam, 2
Hong Kong, 1 pk.
Philadelphia, 2

Soap Lyes—
Marseilles, 30 cks. J. M. Beckett & Son
,, 62 C. Thomas & Brs.
,, 30

Soap Stock—
New York, 1,800 brls.

Soapstone—
Bordeaux, 200 bgs. Geo. G. Blackwell, Sons & Co., Ld.

Soda—
New York. 255 sks.

Sodium Nitrate—
Caleta Buena, 804 bgs. Graham, Rowe & Co.
Iquique, 11,973

Starch—
Vera Cruz, 10 sks.
Newport News, 250 bgs.
Hamburg, 80 cs.
Baltimore, 1,400
Rotterdam, 40

Sulphur—
Catania, 150 bgs.
Sulphuric Acid—
Naples 30 brls.
Tallow—
B. Ayres, 1,431 hds.
Zarate, 176 brls. 230 pps.
San Francisco, 500 425 tcs.
New York, 225 Colby & Co.
Baltimore, 150
Philadelphia, 250 Armour & Co.
" 10 Cudahy Packing Co.
Boston, 65
Tannin Extract—
Nantes, 550 cks. Boutcher, Bacon & Co
Marseilles, 180
Tartar—
Valparaiso, 15 sks. M. Droste
Tartaric Acid—
Marseilles, 58 cks.
Ultramarine—
Hamburg, 8 cks.
Rotterdam, 19
Varnish—
New York, 23 brls. W. G. Warren
Waste Salt—
Hamburg, 1,100 bgs.
White Lead—
Rotterdam, 36 cks.
Wood Pulp—
Halifax, 2,517 bls. Becker & Co.
Oporto, 1,100
Boston, 600 pks. H. B. Wood
Zinc White—
Rotterdam, 80 cks.
Stettin, 25 Morris Ashby, Ld.

MANCHESTER.

Week ending May 6th.

Acetic Acid—
Rotterdam 56 btls.
Antimony Salt—
Rotterdam, 4 cks.
Barytes—
Antwerp, 254 bgs.
Hamburg, 4 cks.
Rotterdam, 11
Chemicals *(otherwise undescribed)*
Rotterdam, 2 cs.
Coal Products—
Alizarine
Rotterdam, 45 cks.
Aniline Salt
Rotterdam, 13 cks.
Pitch
Rotterdam 5 cks.
Colours—
Rotterdam, 129 cks. 30 cs. 6 bxs. 31 brls.
Dyestuffs—
Extracts
Nantes, 250 cks. J. & P. Hutchison
New York, 100 brls.
Tannin Extract
Rouen, 22 cks. 10 cs.
Farina—
Rotterdam, 500 bgs. N. W. Jackson
Stettin, 320 Browne, Geveke, & Co.
" 1,532
Glucose—
New York. 100 brls.
St. John, N.B., 50
Stettin, 300 cks.
Glue—
Hamburg, 4 cks.
Rotterdam. 60 bgs. 5 cs.
Rouen, 20 21 74 bls. 18 cks.
Lead Acetate—
Hamburg, 3 cks.
Stettin, 28
Lithopone—
Rotterdam, 12 cks.
Paraffin Wax—
New York, 420 brls.
Potash—
Hamburg, 5 dms.
Rotterdam, 80 cks.
Rouen, 2
Potassium Prussiate—
Rouen, 2 cks.
Pyrites—
Huelva, 1,820 t.
Soap Lyes—
Nantes, 10 brls. J. & P. Hutchison
Sodium Aluminate—
Hamburg, 6 cks.
Sodium Silicate—
Rotterdam, 2 cks.
Starch—
Antwerp, 584 cs.
Hamburg, 84
New York, 2,100 bgs
Rotterdam, 54
St. John N.B., 2 450
Stearine—
Antwerp, 13 bgs.
Tartaric Acid—
Hamburg, 8 cks.
Rotterdam, 52
Ultramarine—
Rotterdam, 2 cks.
Wood Pulp—
Christiania, 4,735 bls. W. H. Ingram
Gothenburg, 3,445
Halifax, N.S., 10,182 bdls.
Hamburg, 320 pks.
New York, 1,438 bdls.
Rotterdam, 50
Skien, 2,740 Felber, Jucker, & Co.
Sarpsborg, 3,610 Kellner, Partington P. P. Co., Ld.
" 200 t. Christopherson, Andrews, & Co.
St. John, N.B., 100
Stockholm, 4,000 bls. 480 pks. W. H Stott & Co.
Zinc Oxide—
Antwerp, 10 cs.
New York, 100 brls.
Rotterdam, 60

HULL.

Week ending May 6th.

Antimony—
Dunkirk, 2 cks. Wilson, Sons, & Co., Ld.
Barytes—
Antwerp, 17 cks. Bailey & Leetham, Ld
" 103 H. F. Pudsey
Rotterdam, 64 Hull & Netherlands S. S. Co.
Bones—
Beyrout, 80 t.
Lattaquia, 30
Mersyne, 1,400 bgs.
Tripoli, 40 t.
Boracic Acid—
Leghorn, 15 brls. Wilson, Sons, & Co., Ld.
Castor Oil—
Leghorn, 14 cs.
Marseilles, 5 Wilson, Sons, & Co., Ld.
" 42 cks.
Chemicals *(otherwise undescribed)*
Antwerp, 4 cks. Wilson,
1 cs. Sons, & Co., Ld.
Coal Products—
Alizarine
Rotterdam, 13 cks. Hull & Netherlands S. S. Co.
157 pks.
Aniline
Rotterdam, 107 pks. Hull & Netherlands S. S. Co.
Aniline Colours
Rotterdam, 7 cks. Hull & Netherlands S. S. Co.
Pitch
Copenhagen, 50 brls. Wilson, Sons, & Co., Ld.
Colours—
Amsterdam, 70 bgs. Hull & Netherlands S. S. Co.
Antwerp, 20 kgs. Wilson,
15 pks, Sons, & Co., Ld.
" 8
Bremen, 2 cks. Veltmann & Co.
Ghent, 22
Hamburg, 2 8 cs.
Rotterdam, 15 Hull & Netherlands S. S. Co.
76 pks.
Cottonseed Oil—
New York, 250 brls. Wilson, Sons, & Co., Ld.
Cream of Tartar—
Rotterdam, 2 cks. Hull & Netherlands S. S. Co.
Dyestuffs—
Extracts
Dunkirk, 4 cks. Wilson, Sons, & Co., Ld.
Valonia
Smyrna, 640 bgs. 312 t. 50.
Farina—
Harlingen, 100 bls. Hull & Netherlands S. S. Co.
400 bgs.
Stettin, 1,050
Glucose—
Hamburg, 135 cks. Wilson, Sons, & Co., Ld.
New York, 25 brls. "
" 150
Glue—
Hamburg, 50 bgs.
Glue Stock—
Dunkirk, 17 bls. Wilson, Sons, & Co., Ld.
Lithopone—
Amsterdam, 21 cks. Hull & Netherlands S. S. Co.
Hamburg, 8
Manure—
Kurrachee, 1,000 bgs.
Stettin, 12 Wilson, Sons, & Co., Ld.
Ochre—
Marseilles, 7 cks. Wilson, Sons, & Co., Ld.
Paint—
Genoa, 31 cs. Wilson, Sons, & Co., Ld.
Paraffin Wax—
New York, 659 brls.
Phosphates—
Dunkirk, 485 t.
Ghent, 159
Potash—
Antwerp, 154 cks. Wilson Sons, & Co., Ld.
Dunkirk, 91 pks. "
Hamburg, 21 dms.
Saltpetre—
Antwerp, 135 bgs. Wilson, Sons, & Co., Ld.
Soap—
Hamburg, 1 cs. Bailey & Leetham, Ld.
Marseilles, 3 Wilson, Sons, & Co., Ld.
Naples, 45 "
New York, 100 bxs.
Stettin, 1 "
Soda—
Hamburg, 11 cks. Wilson, Sons, & Co., Ld.
Sodium Nitrate—
Iquique, 10,707 bgs.
Starch—
Amsterdam, 280 cs. Hull & Netherlands S. S. Co.
Antwerp. 60 Bailey & Leetham, Ld.
" 204 Wilson, Sons, & Co., Ld.
Bremen, 1,452 Veltmann & Co.
Ghent, 250 bxs. Wilson, Sons, & Co., Ld.
Stearine—
New York 36 hds.
Sulphur—
Leghorn, 11 cks. Wilson, Sons, & Co., Ld
Tallow—
Dunkirk, 134 cks. Wilson, Sons, & Co , Ld.
Tartar—
Naples, 23 cks. Wilson, Sons, & Co., Ld.
Tartaric Acid—
Rotterdam, 4 cks. Hull & Netherlands S. S. Co.
" 4 Wilson, Sons, & Co., Ld.
Ultramarine—
Bremen, 2 cks. Veltmann & Co.
" 12 bgs.
Vitriol—
Hamburg, 38 cks. Wilson, Sons, & Co., Ld.
Waste Salt—
Hamburg, 50 t. Bailey & Leetham, Ld.
" 560 bgs.
White Lead
Rotterdam, 69 cks. Hull & Netherlands S. S. Co.
Wood Pulp—
Abo, 94 bls. J. Good & Sons
" 42
Bergen, 27 pks. Wilson, Sons, & Co., Ld.
" 85 Pedersen & Co.
Christiania, 1,623 Wilson, Sons, & Co., Ld.
Drontheim, 650 "
" 325 bls. "
Gothenburg, 860 pks. "
Hango, 312 bls. J. Good & Sons
" 174
New York, 1,714 pks. Wilson, Sons, & Co., Ld.
Rotterdam, 310 Hull & Netherlands S. S. Co.
Zinc White—
Amsterdam, 25 cks. Hull & Netherlands S. S. Co
Hamburg, 23 Bailey & Leetham, Ld.

GLASGOW.

Week ending May 11th.

Barium Sulphate—
Antwerp, 200 bgs. 17 cks.
Castor Oil—
Marseilles, 17 cks.
Antwerp, 83
Chemicals *(otherwise undescribed)*
Rotterdam, 2 cs J. Rankine & Son
Hamburg, 5
Amsterdam, 1 "
Coal Products—
Alizarine
Rotterdam, 70 cks. J. Rankine & Son
Aniline
Rotterdam, 16 cks. 15 cs. J. Rankine & Son
Aniline Colours
Hamburg, 14 pks J. Currie & Co.
Pitch
New York, 14 brls.
Colours—
Rotterdam, 7 cks. 1 cs. J. Rankine
4 brls. & Son
Hamburg, 1
Rotterdam, 10 cks. 5 cs. J. Rankine
95 pks. 4 brls. & Son
Dextrine—
Hamburg, 200 bgs.
New York, 16
Dyestuffs—
Cutch
Rangoon, 1,047 bxs. P. Henderson & Co.
Antwerp, 200 cs.
Shumac
Palermo, 700 bgs. 250 bls.
Dyewood Extract—
Antwerp, 25 cks.
Glucose—
New York, 1,050 brls.
Glue—
Rotterdam, 10 bgs. J. Rankine & Son
New York, 145 brls.
Hamburg, 20 J. Currie & Co.
" 4 cks.
Molasses—
New York, 492 brls.
Ochre—
Marseilles, 42 cks.
Paint—
Portland, M., 50 kgs.
Amsterdam, 1 ck. J. Rankine & Son
Painters' Colours—
Antwerp, 6 cks. 7 cs.
Phosphates—
Antwerp, 1,000 bgs.
Potash—
Rotterdam, 20 cks. J. Rankine & Son
Hamburg, 50 J. Currie & Co.
" 32 dms.
Potassium Carbonate—
Hamburg, 20 cks.
Potassium Cyanide—
New York, 2 cs.
Pyrites—
Huelva, 3,977 t. Tharsis Sulphur & Copper Co
Rosin—
New York,

Salt—
Hamburg, { 500 bgs. / 101 t.
Soap—
New York, { 2,500 bxs. / 371 brls.
Soda—
Genoa, 30 brls.
Sodium Nitrate—
Iquique, 1,205 t. Thompson, Aikmann & Co.
Starch—
New York, 200 bgs.
Amsterdam, 80 cs
Antwerp, 20 40
Rotterdam, 47 J. Rankine & Son
Stearine—
Amsterdam, 169 bgs. J. Rankine & Son
Sulphur—
Genoa, 30 brls.
Tallow—
New York, 14 brls.
Tartar—
Bordeaux, 9 cks.
Ultramarine—
Antwerp, 4 cs.
Varnish—
New York, { 79 brls. / 7 cs
Antwerp, 2 cks.
Waste Salt—
Hamburg, 250 cks. J. Currie & Co.
White Lead—
Rotterdam, 35 cks. J. Rankine & Son
Wood Pulp—
Portland, M., 40 bdls.
Christiania, 349 bls J. T. Salveson & Co.
Christiansand, 2 919 ,,
Zinc Oxide—
Antwerp, 8 cks.
Zinc White—
Rotterdam, 56 pks. J. Rankine & Son

TYNE.

Week ending May 6th.

Barytes—
Amsterdam, 43 cks. W. Swanston & Sons
Antwerp, 100 bgs. Tyne S. S. Co.
Rotterdam, { 270 / 112 cks. ,,
Chemicals *(otherwise undescribed)*
Rotterdam, 20 tins Tyne S. S. Co.
Colours—
Hamburg, 3 pks.
Glue—
Hamburg, 4 cks. Tyne S. S. Co.
Lead Acetate—
Amsterdam, 6 cks. W. Swanston & Sons
Ochre—
Rouen, 62 t.
Paint—
Christiania, 22 pks.
Phosphates—
Dunkirk, 290 t.
Rosin—
Baltimore, 500 brls. Furness, Withy, & Co.
Soap—
Rotterdam, 2 cs. Tyne S. S. Co.
Starch—
Antwerp, 80 cs. Tyne S. S. Co.
Rotterdam, 80 ,,
White Lead—
Antwerp, 32 cks. Tyne S. S. Co.
Wood Pulp—
Bergen, 16 bls. P. H. Matthiessen & Co
Zinc Oxide—
Rotterdam, 20 cks Tyne S. S. Co.

GOOLE.

Week ending May 3rd.

Acetic Acid—
Rotterdam, 5 cks.
Alkali—
Calais, 15 cks.
Antimony—
Boulogne, 1 ck.
Barytes—
Antwerp, { 160 bgs. / 17 cks.
Colours—
Amsterdam, 3 cks.
Boulogne, 83 5 cs 86 pks.
Hamburg, 46
Rotterdam, 582 79 3
Dyestuffs *(otherwise undes.)—*
Boulogne, 29 cks.
Dyestuffs—
Extracts
Antwerp, 7 cs.
Hamburg, 88 cks.
Farina—
Amsterdam, 5 brls.
Delfszyhl, 500 bgs.
Glue—
Antwerp, 10 bs.
Boulogne, 4 cks.
Ghent, 5
Rotterdam, 14 bgs.
Glycerine—
Hamburg, 30 cks.
Lead Acetate—
Hamburg, 15 cks.
Phosphates—
Ghent, 860 bgs.
Hamburg, 4 cks.
Saltpetre—
Hamburg, 7 cks.
Waste Salt—
Hamburg, { 200 t. / 508 bgs. / 874 cks.
Wood Pulp—
Drontheim, 480 t.
Zinc Oxide—
Antwerp, 10 brls.

GRIMSBY.

Week ending May 6th.

Barytes—
Hamburg, 40 cks.
Rotterdam, 100 bgs.
Caoutchouc—
Antwerp, 2 cs. 1 bl.
Hamburg, 1 ck. 4
Rotterdam, 1
Chemicals *(otherwise unaescribed)*
Hamburg, 4 cs.
Colours—
Antwerp, 142 pks.
Hamburg, 21 cks. 3 cs, 100
Rotterdam, 8 kgs. 6
Dyestuffs—
Indigo
Rotterdam, 16 cs.
Farina—
Hamburg, 100 bgs.
Glue—
Hamburg, 2 cks.
Wood Pulp—
Gothenburg, 40 bs.
Zinc Ashes—
Antwerp, 17 cks.

EXPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending May 11th.

Acids—
Madras, 26 cs. £49
Ammonia—
Teneriffe, 8 c. £10
Hamburg, 10 dms. 20
Bombay, 5 11
Cologne, 1 t. 13 37
Cape Town, 12 cs. 18
Ammonium Carbonate—
Gothenburg, 1 t. 16 c. £50
Cologne, 1 13 36
Dunedin, 10 17
Christchurch 10 cs. 20
Hamburg, 12 pks. 28
St. Petersburg. 35 920
Ammonium Muriate—
Cologne, 5 t. 12 c. £87
Ammonium Sulphate—
Barbadoes, 150 t. £1,700
Valencia, 5t 16 c. 570
Newport News, 75 780
Arsenic—
Lyttelton, 1 t. 5 c. £25
Basic Slag—
Jamaica, 2 t. £16
Bone Ash—
E. London, 2 t. 8 c. £52
Boracic Acid—
Sydney, 1 t. £28
Borax—
Townsville, 1 t. £18
Sydney, 50 kgs. 44
Carbonic Acid Gas—
Hamburg, 1 t. £55
New York, 17 cs. 85
Caustic Potash—
Hong Kong, 3 c. £6
Otago, 11 15
Caustic Soda—
Sydney, 15 c. £24
Townsville, 2 t. 17
Chemicals *(otherwise undescribed)*
Constantinople, 150 brls. £137
Paris, 15 40
Yokohama, 20 cks. £148
,, 10 74
2 cs. 11
Cologne, 5 kgs. 32
Calcutta, 101
Perth, 20 95
Rotterdam, 10 58
Durban, 10 11
Shanghai, 14 31
Calcutta, { 4 / 20 brls. 73
Ottawa, 40 66
Wellington, 8 pks. 40
Philadelphia, 18 cks. 316
Adelaide, 13 cs. 57
Boston, 26 380
Valparaiso, 2 38
Melbourne, 2 25 70 242
New York, 23 40 14 406
Hamburg, 27 kgs. 20 221
E. London, 13 55
B. Ayres, 10 30
Pt. Elizabeth, 10 28 31
Bombay, 30 106
Citric Acid—
Calcutta, 1 cs. £6
Rotterdam, 2 kgs. 14
Durban, 7 29
Brisbane, 2 16
St. Petersburg, 4 cks. 5 c. 172
Genoa, 1 t. 122
E. London, 3 19
Otago, 1 7
Cape Town, 2 16
Riga, 10 70
Lyttelton, 2 14
Jamaica, 2 pks. 24
Copenhagen, 1 130
Coal Products—
Alizarine
Montreal, 5 cks. £38
Aniline Dye
Calcutta, 2 cs. £35
Aniline Oil
Ghent, 2 brls. £25
Anthracene
Cologne, 240 cks. £335
Benzol
Cologne, 78 cks. £170
Carbolic Acid
Montreal, 6 cks. £33
Demerara, 9 pks. 26
Yokohama, 200 kgs. 607
St. Petersburg, 9 cs. 51
Sydney, 2 20 dms. 14
Hong Kong, 20 8
Carbolic Crystals
Perth, 2 cs. £8
Coal Tar Dyes
Boulogne, 1 ck. £18
Geelong, 9 pks. 97
Boston, 10 175
Creosote
New York, 250 cks. £144
Dieppe, 80 500 galls. 522
Creosote Oil
New York, 500 cks. £376
Boston, 50 53
Naphthaline
Amsterdam, 4 cks. 6 bgs £9
Rotterdam, 16 21
Hamburg, 33 43
Yokohama, 10 kgs. 5
Pitch
Sydney, 6 pks. £5
Seville, in bulk 1,900
Montreal, 526 cks. 164
New York, 70 20
Cadiz, 235 t. 310
Amsterdam, 723 877
Dunkirk, 275 320
Antwerp, 790 917
Alexandria, 400 brls. 125
Pyridine
Cologne, 12 dms. £260
Pyridine Bases
Cologne, 48 cks. £480
Tar
Hamburg, 250 brls. £113
Bombay, 85 rnlts. 69
Karachi, 25 21
Sydney, 100 dms. 21
Durban, 740 48
Tar Oil
Brussels 5 cks. £5
Toluol
Treport, 3 cks. £10
Coal Products *(otherwise undes.)—*
Townsville, 12 dms. £7
Sydney, 250 49
Copperas—
Calcutta, 11 t. £22
Copper Sulphate—
Malta, 4 t. 19 c. £114
Bordeaux, 34 831
Marseilles, 50 1,304
Vigo, 10 15
Cream of Tartar—
Wellington, 5 c. £19
Fremantle, 3 10
Disinfectants—
Antigua, 1 cs. £13
Singapore, 23 dms. 23
Yokohama, 1 2
Demerara, 15 cks. 17
Montreal, 40 34
Bombay, 1,500 dms. 68
Riga, 5 7
Swatow, 25 10
Calcutta, 50 42
Brisbane, 23 26 98
Durban, { 50 87 / 145 pks.
Madras, 14 31
Sydney, 15 63
Fremantle, 25 21
Perth, 8 32
Bombay, 135 699 dms. 348
Hamburg, 50 200
Glycerine—
New York, 20 t. 7 c. £57
Manure—
Riga, 101 t. 4 c. £250
Singapore, 5 48
Phosphoric Acid—
Townsville, 4 t. 9 c. £60
Phosphorus—
Vera Cruz, 4 cs. £20
Blenheim, 5 c. £5
Potassium Bicarbonate—
Philadelphia, 2 t. 7 c. £60
Potassium Chlorate—
Barbadoes, 20 kgs. £30
Durban, 2 t. 67
Potassium Cyanide—
Auckland, 61 £502
Durban, 8 20 cs. 1,074
Delagoa Bay, 50 514
E. London, 12 6 c. 1,397
Potassium Prussiate—
Pt. Elizabeth, 6 c. £23
New York, 20 cks. 225
Salammoniac—
Varna, 10 c. £25
Larnaca, 7 18
Saltpetre—
Sydney, 2 t. 10 c. £33

Perth, 1 20
Durban, 8 9

Sheep Dip—
E. London, 7 c. £11
London, Ont., 2 t. 5 21
Punta Arenas, 5 5 150
B. Ayres, 1,000 cs. 2,500

Soap Lyes—
Hamburg, 12 dms. £122

Soap Stock—
New York, 5 t. 7 c. £150

Soda—
Otago, 6 c. £6
Cape Town, 13 5

Soda Ash—
Oamaru, 2 t. 14 c. £19

Soda Crystals—
Cape Town, 4 t. 1 c. £12

Sodium Bicarbonate—
Iquique 1 t. £6
Marseilles, 10 72
Sydney, 6 c. 6
Callao, 2 12
Durban, 1 7

Sodium Prussiate—
Boston, 10 t. £536

Sulphur—
Cape Town, 100 cks. 150 kgs. £151
New York, 6 20

Sulphuric Acid—
Chinde, 20 cs. £16
Jamaica, 20 pks. 15
Iquique, 4 dms. 5
Callao, 5 7

Tartaric Acid—
Montreal, 2 c. £10
Dunedin, 5 23
Otago, 1 kg. 5 45
Barcelona, 6 29
Cape Town, 2 13
Riga, 2 13
Hiogo, 10 58
Callao, 7 43

LIVERPOOL.

Week ending May 10th.

Acetic Acid—
Copenhagen, 3 t. 16 c. £74

Aluminoferric—
Venice, 5 t. 3 c. £14

Aluminous Cake—
Melbourne, 6 t. 3 c, 2 q. £18

Ammonia—
Coquimbo, 3 c. £8

Ammonium Carbonate—
Lisbon, 18 c. £50
Bilbao, 2 t 63
Mollendo, 4 cs. 6
Copenhagen, 10 14
Venice, 1 26
Genoa, 2 52
Rangoon, 15 16 42
Rotterdam, 1 56
New Fairwater, 1 7 37
Barcelona, 1 3 q. 29

Ammonium Muriate—
Antwerp, 14 c. £ 0
Trieste, 1 t. 18
Melbourne. 1 18
Copenhagen, 1 2 27

Ammonium Sulphate—
Gd. Canary, 15 t. 1 c. 1 q. £150
Nagasaki, 10 1 6
Samarang, 63 1 631
Antwerp, 71 10 792
Barcelona, 64 19 2 696
Demerara, 201 15 2,365
Barbadoes, 101 10 1,180
Gd. Canary, 18 212
Rio de Janeiro, 1 19 1 25
Cullera. 110 16 3 1,155
Valencia, 394 1 3 4,162
Teneriffe, 25 18 298
Malaga, 10 117
Alicante, 10 117
Las Palmas, 43 1 496
Messina, 10 15 120
Palermo, 15 10 175

Arsenic—
Newport News, 2 t. 14 c. £52

Basic Slag—
Granville, 465 t £325
Nantes, 98 148

Bleaching Powder—
Baltimore, 44 cks.
Bilbao, 109
Constantinople, 35
Johnsonburg, 158
Miamisburg, 18
Middleton, 31
Milwaukee, 169
Montreal, 39 60 kgs. 25 brls.
Naples, 34
Newport News, 20
New York, 61
Philadelphia, 195
Rio de Janeiro, 14
San Sebastian, 74
Santos, 16
Seville, 27
Tampico, 9
Tyrone, 57
Venice, 20

Boracic Acid—
Adelaide, 1 t. 4 c. £29

Borax—
Stockholm, 9 t. 14 c. £164
Antwerp, 19 2 q. 16
Bilbao, 1 17
Brantford, 5 85
Toronto, 9 7 147
Campana 6 9
Hamburg, 25 18 2 429
Rosario, 1 4 2 23

Calcium Carbide—
Singapore, 10 c. 2 q. £17

Castor Oil—
Panama, 30 cs
Pt. Antonia, 5

Caustic Soda—
Amsterdam, 309 dms.
Antwerp. 3
Barcelona, 58 104 cks.
Bejar, 36 6 brls.
Bilbao 15
B. Ayres, 240
Calcutta, 48
Callao, 120
Chicago, 10
Christiania. 5
Cuidad Bolivar, 5
Copenhagen, 50
Fiume, 15
Galatz, 24
Genoa. 43
Guaymas, 50
Guelph, 33
Hamburg, 42
Havana, 40
Hiogo, 996
Hong Kong, 3
Kobe, 200
Leghorn, 25
Libau, 6
Lisbon, 65
Malaga, 20
Marseilles, 110
Melbourne, 507
M. Video. 25
Nagasaki, 50
New Fairwater, 55
Nigo, 10
Oporto, 45
Para, 5
Penang, 10
Piræus, 80
Pisco, 30
Pt Natal, 37
Rangoon, 42
Rio G. do Sul, 70
Rotterdam, 104
Roubaix, 35
Rouen, 53
St. Petersburg, 250
San Sebastian, 60
Santander, 50
Seville, 48
Sfax, 5
Shanghai, 35
Singapore, 5
Stettin, 77
Sydney, 15
Tampico. 249
Tarragona, 90 25 53
Titusville, 50
Valparaiso, 25
Volo, 50
Wellington. 22
Wilmington, 57
Yokohama, 600

Chemicals *(otherwise undescribed)*
St. John, Nf'd, 1 t. £5
Gasablanca, 2 10 c 2 q. 12
Cape Town, 1 6 3 10
Callao, 2 26 1 13
Ibrail. 2 1 10
New York, 15 11 467
Bombay, 37 brls. 172
M. Video, 20 15 1 57
Johannesburg, 5 500
Singapore, 3 300
Alexandria, 6 30
Odessa, 20 503
Madras, 1 5
Naples, 4 cks. 53
Auckland, 20 kgs. 6
Brisbane, 19 5
Portland, 49 7 1 q. 230
Galatz, 3 15
Montreal, 15 10 72
B. Ayres, 31 15 147
Piræus, 8 2 2
Seville, 1 1 5
Melbourne, 2 11 3 12
Philadelphia, 10 30

China Clay—
Boston, 2,349 cks.
Merriston, 60
Montreal, 450
Philadelphia, 320
Rio de Janeiro, 132
Vera Cruz, 101

Chloride of Lime—
Cape Town, 3 t. £24

Chromium Oxide—
Antwerp, 3 c. 3 q. £25

Citric Acid—
New York, 10 c. £66

Coal Products—
Aniline Colours
Bombay, 2 cs.
Chicago, 2 cks.
Montreal. 3 kgs.
New York, 39 1 6 brls.
Philadelphia, 1
Aniline Dye
Barcelona, 9 cks.
Lagos, 1 cs.
Aniline Oil
Genoa, 8 dms.
Aniline Salt
Alexandria, 4 cks.
Genoa, 10
Hercules, 5 brls.
Leghorn, 4 pks.
Piræus, 20
Rouen, 2
Salonica, 3
Carbolic Acid
Rouen, 5 t. 2 c. £52
Hamburg, 11 2 c. 43
Milan, 1 1 2 71
Florence, 10 3 35
Venice, 10 3 35
Rotterdam, 4 19 2 105
B. Ayres, 4 17
Kobe, 1 10 91
Napier, 20 dms. —
Philadelphia, 11 3 300
Lisbon, 19 3 61
Bombay, 11 20
Yokohama, 5 383
Sydney. 4 40
Creosote
New York, 225 cks.
Pitch
Galatz, 40 brls.
Ibrail, 20
Karachi, 10
Tar
Axim, 12 dms.
Bordeaux, 246 cks.
B. Ayres, 500
Galatz. 20 50 brls.
Karachi, 10
Las Palmas, 12
Mossamedes, 5

Copperas—
M. Video, 5 t. 5 c. 2 q. £11
Vera Cruz, 2 15 3 6

Copper Sulphate—
Rouen, 20 t. 3 c. £432
Piræus. 20 6 2 q. 580
St. John, Nfd, 2 5 47
Hamburg, 24 10 3 486
Naples, 58 4 1 1,171
Bordeaux, 127 3 3,025
Oporto, 24 5 3 578
Bilbao, 5 2 2 128
Nantes, 14 14 1 279
Galatz, 2 10 59
Venice, 305 17 7,848
Genoa, 202 16 2 5,064
Lisbon, 22 2 1 484
M. Video, 3 14 3 98
Vigo 33 1 747
Leghorn, 85 13 3 2,136
Havana 1 11 1 40
Montreal, 1 5 25
Cette, 191 3 4,714

Cream of Tartar—
Malta, 2 c. £10

Disinfectants—
Madras, 1 t. 10 c. £17
Hong Kong, 13 3 q. 18
Rangoon, 1 8
Napier, 2 cks. —
Dried Blood—
Las Palmas, 9 t. 15 c. £100

Glycerine—
Tampico, 9 c 3 q. £30
Sydney 1 t. 52
Hamburg. 74 4 1 970
Newport News, 100 7 3,140
Montreal, 9 19 2 550
Antwerp. 9 19 1 518
Mollendo, 2 6
Alexandria, 5 12
Barcelona, 1 50
Hiogo, 1 25
Piræus, 1 25

Magnesia—
Lisbon, 16 tcs. 26 cs. 8 brls.
Vera Cruz, 19

Manganese Oxide—
St. Petersburg, 4 t. 4 c. £57
Antwerp, 15 2 q. 14

Manganese Sulphate—
St. Petersburg, 1 t. 10 c. £29

Manure—
Kingston, 15 t. £123
Penang, 25 200
Havana 2 70
Gd. Canary, 6 61
Teneriffe, 5 69

Paint—
Alexandria, 75 kgs.
Antwerp, 20 2 cs.
Benguela. 75
Boston. 1 ck.
Calcutta, 10 4
Cumana, 3
Dakar, 2
Fernando Po, 32
Gibraltar, 47 pks.
Havana, 17 cks.
Iquitos, 100
Lagos, 10 1 20 dms.
Larnaca, 2 cks.
Loando, 30
Manila, 18
Manaos, 4
Matanzas, 1
Melbourne, 3
M Video, 62 28 dms.
Mossamedes 2 1 brl.
New York, 20
Piræus, 1 ck.
Pisigua, 4 pks.
Pt. Natal, 22 cs.
Porto Novo, 1
Punta Gooda, 6 1 ck.
Quebec, 20 dms.
Rio de Janeiro, 8 cks.
St. John's, N'fd, 5
61 pks.
San Juan, 671
Shanghai, 1,306
Sierra Leone, 151
Valparaiso, 112 dms.
Vera Cruz, 3 10 cks.

Painters' Colours—
Calcutta. 10 cks.
Cartagena, N.G., 8 bls.
Gijon, 4 brls.
Havana, 10 kgs. 2 tcs. 18
Manila, 530 100 dms.
Maranham, 1 cs. 10 cks.
Mauritius, 770
Madellin, 8 bls.
M. Video. 24 crts. 5 brls.
Montreal, 10
Nassau, 1 2 cs. 7
New York, 1
Para, 126 pks.
Philadelphia, 250 brls.
Pietermaritzburg, 1 1 cs. 2 cks.
Salahora, 2 brls.
Santos, 15
Tampico, 7

Paraffin Wax—
Alexandria, 10 cs.
Boston, 100
Odessa, 45 bgs.
Rio de Janeiro, 25 cks 6
10 brls.
Volo, 6 cs.

Phosphates—
Cape Town, 44 t. 12 c. 3 q. £73

Potassium Bichromate—
Vera Cruz, 1 ck. £15

Potassium Chlorate—
Bjorneborg, 5 t. £152
Copenhagen, 3 98
Fairwater, 1 5 c. 42
Hiogo, 25 820
Lisbon, 10 306
Naples, 1 30
Newfairwater, 10 16
Philadelphia, 2 10 25
Rotterdam, 10 25

Santiago, 12 22
Tampico, 6 17 221

Potassium Prussiate—
Montreal, 1 t. 7 c. £101
Vera Cruz, 2 1.0

Red Oxide—
Montreal, 10 t. 13 c. £150

Salammoniac—
Alexandria, 1 t. £33
Bourgas, 1 33
Hamburg, 2 c. 5
Karachi, 1 1 31
Montreal, 8 13

Salt—
Antwerp, 135 t.
Akassa, 292
Baltimore, 165
Belize, 80 6 c.
Boston, 130
Brass, 10
B. Ayres, 31 19
Cameroons, 30 10
Canada, 299 19
C. C. Castle, 6 5
Cardenas 50
Caibarien, 50
Copenhagen, 97
Delagoa Bay, 9 16
Dalhousie, N.B., 220
E. London, 15
Ghent, 150
Gibraltar, 50 cs.
Hamburg, 101 2 c
Kingston Jam., 5
Lagos, 50
Matadi, 27 5
Melbourne, 50
Montreal, 1,1 7
Newfairwater, 30
New York, 115 5 cks.
Noqui, 22 6
Pt. Elizabeth, 35 14
Pt. Natal, 10
Rio de Janeiro, 28
Rosario, 10 50 cs.
St. Petersburg, 350
San Juan, 50
Santiago, 50
Santos, 200
Savannah, 300
Sierra Leone, 200
Stettin, 15
Ukaka, 37 10 c.

Salt Cake—
New York, 6 t. 4 c. £84

Saltpetre—
Para, 1 t. £21
Rangoon, 10 c. 11
Rosario, 1 4 2 q. 26
Savanilla, 6 8 3 141
Tampico, 1 7 2 29

Satinite—
Hamburg, 10 t. 15 c. £30

Sheep Dip—
B. Ayres, 8 t. 18 c. 2 q. £240
M. Video, 400 dms. 80
Punta Arenas, 60 60
Sydney, 13 12 695
20 cks 5 cs. 850
Winnipeg, 17 c. 42

Soap—
Alexandria, 210 bxs.
Bangkok, 59
Barberton, 7 cs.
Belize, 780
Bermuda, 50
Bombay, 37
Brussels, 1,946
Calcutta, 123 1,000 bdls.
Canaria, 203
C. C. Castle, 65
Cape Town, 5,175 12
Christiania, 120 10
Calmar, 230
Colombo, 5
Constantinople, 42
Delagoa Bay, 1,790 28
Dominica, 20
E. London, 1,550 50 15
Florence, 10
Gibraltar. 351 1
Guadeloupe, 500
Halifax, 24
Hamburg, 15 2
Havana 2
Hong Kong, 500
Iquitos, 900
Johannesburg, 100 200 12
Karachi, 30
Kingston, Ja., 100 71
Lagos, 1,657
Madras, 10 12
Malta, 40
Manaos, 910
Melilla, 50
Mollendo, 40
Montreal, 198
Mossel Bay, 650
New York, 2 t. 2 c. 51 cs.
Osaka, 5
Penang, 30 bxs.
Para, 500 50
Pt. Natal, 150 10
Pretoria, 127
Quebec, 150 4
Rangoon. 8 20 pks.
Rawal Pindi, 12
Rotterdam, 341 320
St. John, N.B., 331
St. John's, N'd., 12 3
Rouen, 100
Sapeli 200
Savanilla, 2
Shanghai, 11,912
Sherbro, 620
Sierra Leone, 240 1
Singapore, 310 100
Sydney. 6,000 cs. 16 tnks.
Teneriffe, 14
Tientsin, 80
Toronto 1,002 1,000
Trinidad, 700
Valparaiso, 54
Warri, 250
Worcester, 10

Soda—
Hong Kong, 2 cks.
Montreal, 1 cs.

Soda Ash—
Bombay, 12 cks.
Boston, 36
Calcutta, 200 kgs. 50
Copenhagen, 80 bgs.
Delagoa Bay, 100 kgs.
Hamburg, 14
Hiogo, 100
Johannesburg, 90 13
Kobe, 50
Launceston, 32
Limon, 12
Melbourne, 12 bgs. 929
M. Video, 50
Montreal, 180 91
New York, 966 13 tcs. 14
Oporto, 20
Osaka, 33
Philadelphia, 32
Piræus, 25 brls.
Portland, 90
Rio de Janeiro, 150
Smyrna, 50
Stettin, 500
Tampico, 11
Toronto, 200
Venice, 300 19
Vera Cruz, 20
Yokohama, 250
Zante, 350

Soda Crystals—
Alexandria, 100 brls.
B. Ayres, 70
Calcutta, 33 kgs.
Halifax, 50 pks.
Malta, 50
Montreal, 75 341 200
1,050 bgs.
N. Orleans, 140 cks.
Oporto. 20
Piræus, 35
Quebec, 15 515 pks.
50 kgs.
St. John's N'fd. 5
Shanghai, 20
Singapore, 7

Sodium Bicarbonate—
Antwerp, 75 bgs. 260 kgs. 36 cks.
Barcelona, 300
Bilbao, 1 cs. 60 brls.
Bombay, 111
Brisbane, 75
Calcutta, 6
E. London, 20 bgs.
Fairwater, 30 kgs.
Galatz, 135
Genoa, 84
Gijon, 44
Guelph, 10 bgs. 5 kgs.
Gutujewski, 300
Hamilton, 40
Iquitos, 4
Johannesburg, 24
Karachi. 20
Kingston, On., 29
Konigsberg, 18 pks.
Medan Ddi, 8 cks.
Melbourne, 710
M. Video, 30
Montreal, 75
Naples, 100 3
Odessa, 300 dms.
Patras, 20
Piræus, 20 kgs.
Pt. Elizabeth, 20
Portland, 50 10
Quebec, 16
450 dms. 20
Rangoon, 20 bgs.
200 kgs.
Rouen, 197 pks.
St. Petersburg, 225
San Luis Potosi, 10
Sao Paulo, 30
Tampico, 3 cks.
Tacotalpam, 40
Toronto, 160
Venice, 40 8
Windsor, 100
Yokohama, 550 bgs.
Zanzibar, 25 kgs. 7

Sodium Carbonate—
New York. 56 brls.

Sodium Chlorate—
New York, 50 kgs.
Rotterdam, 10
St. Petersburg, 400
Vera Cruz, 4 cks.

Sodium Nitrate—
Demerara. 85 bgs. (double)

Sodium Silicate—
Bilbao, 48 brls.
Catania, 6

Sodium Sulphate
B. Ayres, 100 bgs.
Callao, 100 kgs.

Stannous Chloride—
Kingston, 3 c. 3 q. £13

Starch—
Pretoria, 70 cs.

Sulphur—
Boston, 51 t. 7 c. £219
Cartagena, 1 4 3 q. 9
Halifax, 1 1 6
Havana, 9 3
Lanzarote, 4 10 25
Montreal, 76 8 328
Para, 6 3 11
Pernambuco, 1 12 1 11
Savanilla, 1 4 3 9

Sulphuric Acid—
Santos, 1 t. 18 c. £15

Superphosphates—
Adelaide, 1 t. 10 c. £7
Cullera, 200 451
Gd. Canary, 15 33
Teneriffe, 21 70

Tartaric Acid—
Habana, 1 t. £111
Havana, 4 c. 27
Mollendo, 11 58

Varnish—
Bilbao, 2 cks.
B. Ayres, 3 cs.
Callao, 1
Genoa, 12
Havana, 1
Hong Kong, 6
Ibrail, 20 dms.
Limassol, 3
Matanzas, 1
Naples, 1
New York, 2
Pernambuco, 1
Shanghai, 37 65
Seville, 11 pks.

White Lead—
Bahia, 10 kgs.
Cape Town, 200 dms.
St. John's, N'fd., 6 cks.

Zinc Chloride—
Bombay, 11 t. 4 c. £145
Quebec, 11 148

MANCHESTER.

Week ending May 10th.

Bones—
Trie Chateau, 392 bgs.

Chemicals (*otherwise undescribed*)
Brantford, 5 pks.
London, 10
Pt. Credit, 14
Quebec, 33 brls.
Sherbrooke, 50
Toronto, 55

Coal Products—
Aniline Colours
Germany, 10 kgs. 1 ck.
Aniline Oil
Belgium, 5 dms.
Germany, 10
Carbolic Acid
France, 192 btls.
Germany, 25 cks.
Montreal, 5
Pitch
Belgium, 303 t. 12 c.
Bordeaux, 952 13
Tar
Belgium. 25 brls.
Toluol
Germany, 2 dms.

Dyestuffs (*otherwise undescribed*)
Toronto, 127 pks.

Farina—
Magog, 10 cks.

Naphthylamine—
Germany, 61 bgs. 14 cks.

Paint—
Bussorah, 8 cks.

Salammoniac—
Bagdad, 14 brls.

Salt—
Montreal, 250 t.
Quebec, 500

Soap—
Holland 40 cs.

Sodium Arseniate—
Canada, 14 cks.
Germany, 33

Tallow—
Bombay, 40 brls.

Tar Salts—
St. Petersburg, 77 bgs.

Varnish—
Bombay, 4 cks.

Zinc Chlorate—
Bombay, 6 cks.

Zinc Sulphate—
Montreal, 3 cks.

GLASGOW.

Week ending May 11th.

Ammonium Carbonate—
Christiania, £49

Ammonium Sulphate—
Amsterdam, 50 t. 2 c. 1 q.
Barcelona, 110 17 3
France, 200
Italy 14 1
Kobe. 48 19 3
Mauritius, 505 7
Penang, 10 19 1
Trinidad, 59 17
Valencia, 832 2 1

Bleaching Powder—
Brisbane, 4 t. 5 c.

Boracic Acid—
Rotterdam, £25

Borax—
Rotterdam, £8

Castor Oil—
Sydney, £21

Caustic Soda—
Mauritius, 0 t. 2 c. 1 q.

Coal Products—
Carbolic Acid
Rotterdam, £100
Creosote Salt
France, £260
Pitch
Amsterdam, £100
Antwerp, 373
Italy, 283 10
Tar
Bombay, £50
Gothenburg, 30
Penang, 88 15
Rangoon, 60 17
Tar and Pitch
Mauritius, £23

Copperas—
Bombay, 16 t. 15 c.

Dextrine—
Italy, £110
Melbourne, 50
U.S.A., 41

Dried Blood—
Mauritius, £81

Dyestuffs (*otherwise undescribed*)
Brisbane, £29 10

Dyestuffs—
Extracts
Spain, £66
Sweden, 42

Logwood
Melbourne, £57
Iodine—
Rotterdam, £1,174
Lead Nitrate—
Paris, £119
Linseed Oil—
Alexandria, 4 t. 1 c.
Hong Kong, 1,000 glns.
Mauritius, 1 t. 10 2 q.
Smyrna, 1 11 2
Litharge—
Christiania, £95
Johannesburg, 1 t.
Logwood Extract—
Spain, £219 17s.
Magnesium Sulphate—
Paris, £40
Manganese—
Rotterdam, £40
Manure—
Mauritius, 10 t. 10 c.
Penang, 10
Paint—
Mauritius, 49 t. 12 c.
Painters' Colours—
Alexandria, £134
Barbadoes, 46
Calcutta, 60 1 cs.
Cape Town, 66
Chefoo, 35 15
E. London, 90
Hong Kong, 290
Penang, 20
Rotterdam, 25
Sydney, 526 15
Paraffin Wax—
Barcelona, £379
Danzig, 11 t. 3 c.
King William's Town, 147
Sicily, 42 15s.
Singapore, 40
Potassium Bicarbonate—
Alexandria, £45
Antwerp, 68
Barcelona, 90
Paris, 142
Rouen, 23
Smyrna, 33
Potassium Cyanide—
Melbourne, £397
Sydney, 300
Potassium Sulphate—
Valencia, £225
Red Lead—
Calcutta, £83
Shanghai, 57
Salt—
Mauritius, 210 t.
Sheep Dip—
Punta Arenas, £60
Soap—
E. London, 10 t. 11 c. 1 q.
Queenstown, 1 5
Penang, 113 4
Shanghai, 3 3 2
Singapore, 5 5 3
U.S.A., 5 19
Sodium Bicarbonate—
Rouen, 14 t. 15 c. 3 q.
Sodium Phosphate—
Canada, 2 t. 1 c.
Starch—
Barcelona, £180
Rotterdam, 42
Sulphuric Acid—
Penang, £42
Rangoon, 280
Tallow—
Rangoon, 16 c. 1 q.
Rotterdam, 9 t.
White Lead—
Singapore, £29
Zinc Ashes—
Rotterdam, 4 t. 3 c. 3 q.

HULL.

Week ending May 6th.

Alkali—
Bergen, 2 cks.
Riga, 70
Ammonium Sulphate—
Dunkirk, 100 bgs.
Palermo, 150
Rotterdam, 250
Caustic Soda—
Riga, 50 dms.
Chemicals (*otherwise undescribed*)
Amsterdam, 30 cks. 10 pks.
Antwerp, 1
Abo, 23
Bergen, 522 slbs.
Christiania, 1 10 cs. 42 pks.
Constantinople, 60
Copenhagen, 1 33
Danzig, 74 33
Drontheim, 158
Ghent, 4
Gothenburg, 46
Hamburg, 21 55
Hango, 11
New York, 30
Odessa, 1,670 1 25
Palermo, 1
Riga, 103
Rotterdam, 19 40
Stettin, 4 84
Trieste, 4
Coal Products—
Pitch
Antwerp, 396 t.
Dunkirk, 207
Tar
Amsterdam, 12 cks.
Christiania, 3
Copenhagen, 15
Dunkirk, 27
Ghent, 6
Gothenburg, 3
Odessa, 1
Reval, 16
Rotterdam, 3
Colours—
Venice, 10 cks.
Cottonseed Oil—
Amsterdam, 25 t. 8 c.
Antwerp, 13
Copenhagen, 5 2
Drontheim, 4 9
Dunkirk, 4 19
Ghent, 5
Hamburg, 8 15
Rotterdam, 8 10
Stockholm, 52 2
Dyestuffs (*otherwise undescribed*)
New York, 12 dms.
Linseed Oil—
Amsterdam, 11 t. 14 c.
Antwerp, 1 5
Bergen, 7
Christiania, 6 1
Christiansund, 3 12
Copenhagen, 1 15
Drontheim, 8 15
Ghent, 7
Hamburg, 11 10
Rotterdam, 7 8
Stavanger, 2 6
Paint—
Antwerp, 11 cks.
Drontheim, 1
Hamburg, 10 cs.
Painters' Colours—
Abo, 10 cks.
Amsterdam, 4 1 cs.
Antwerp, { 11 2 29 pks. 119 dms
Bergen, 1 15
Bremen, 16
Christiania, { 1 1 30 pks. 15 dms.
Copenhagen, 23 1 3
Danzig, 10
Ghent, 8
Gothenburg, 2 20
Hamburg, 31 10
New York, 45
Norrkoping, 60
Odessa, 55
Rotterdam, 41 1 18
Stettin, 10
Stockholm, 2 4
Soap—
Amsterdam, 1 cs.
Drontheim, 1
Palermo, 1
Stettin, 1
Sulphate of Lime—
Venice, 45 cks.
Tallow—
Rotterdam, 13 cks.
Varnish—
Amsterdam, 5 cks.
Antwerp, 1 cs. 2 dms.
Christiania, 1
Danzig, 4
Ghent, 1
Rotterdam, 1
Stettin, 14

TYNE.

Week ending May 6th.

Alkali—
Amsterdam, 33 t. 19 c.
Savona, 29 1 3 q.
Ammonia—
Pomaron, 8 c. 2 q.
Ammonium Muriate—
Stockholm, 4 t. 10 c. 2 q.
Ammonium Phosphate—
St. Petersburg, 1 t.
Ammonium Sulphate—
Christiania, 1 t.
Antimony—
Barcelona, 1 t.
Rotterdam, 5
Arsenic—
Christiania, 1 t. 3 q.
Barium Binoxide—
Antwerp, 10 t. 11 c. 3 q.
Genoa, 5 19
Hamburg, 10 13 2
Barium Carbonate—
Hamburg, 169 t. 13 c.
Rotterdam, 231
Bleaching Powder—
Amsterdam, 59 t. 19 c. 2 q.
Antwerp, 24 19 3
Bergen, 5 1 3
Christiania, 12 9
Drontheim, 10 13 3
Gothenburg, 45 6 3
Oporto, 7 1
Rotterdam, 6 18 2
St. Petersburg, 128 7 3
Venice, 4 19
Castor Oil—
Montreal, 37 t. 12 c.
Caustic Soda—
Amsterdam, 1 t. 16 c.
Antwerp, 14 16
Barcelona, 81 10 1 q.
Christiania, 3 18
Copenhagen, 4 18 2
Gefle, 4 18 3
Genoa, 34 4 1
Hamburg, 18 3
St. Petersburg, 45
Stockholm, 19 8 3
Venice, 5 8
Chemicals (*otherwise undescribed*)
Montreal, 11 t. 5 c. 2 q.
Chloride of Lime—
New York, 50 t. 18 c. 1 q.
Coal Products—
Carbolic Acid
Rotterdam, 15 cks.
Colours—
Genoa, 8 c.
Fluor Spar—
Gothenburg, 51 t.
New York, 56 17 c.
Gutta Percha—
Bergen, 1 q.
Gypsum—
New York, 35 t. 19 c. 3 q.
Hydrochloric Acid—
Pomaron 1 t. 3 q.
Iron Oxide—
Genoa, 5 t. 1 q.
Litharge—
Amsterdam, 1 t. 8 c. 1 q.
Gothenburg, 2 17 3
Hamburg, 4 cks.
Stockholm, 10 t. 14 3
Magnesia—
Antwerp, 1 c.
Barcelona, 8 t. 5 1 q.
Genoa, 1 3
Hamburg, 1 19
St. Petersburg, 7 1
Manure—
Christiania, 5 t.
Pomaron, 50 2 c.
Valencia, 528
Nitric Acid—
Pomaron, 11 c. 1 q.
Paint—
Antwerp. 10 c.
Christiania, 3
Genoa, 4
Gothenburg, 10
Hamburg, 2 t. 10
Pomaron, 1 11 1 q.
Rotterdam, 1 11
Stockholm, 6
Paraffin Wax—
Barcelona, 7 t.
Red Lead—
Amsterdam, 16 c. 2 q.
Christiania, 2 t. 16
Copenhagen, 1 6 1
Genoa, 7 15
Hamburg, { 2 15 / 10 cks.
Oporto, { 8 / 2 t. 1 2
Pomaron, 6 1
Savona, 3 15 2
St. Petersburg, 10 3 3
Stockholm, 17 2 1
Soap Lyes—
Hamburg, 9 dms.
Soda—
Amsterdam, 10 t. 4 c. 1 q.
Christiania, 7 7 1
Gefle, 13
Pomaron, 1 19
Rotterdam, 25 3 3
Soda Ash—
Antwerp, 3 t. 7 c.
Bergen, 10
Genoa, 10 10 2 q.
Oporto, 6 cks.
Stockholm, 75 t. 1
Sodium Hyposulphite—
Stockholm. 4 t. 18 c. 1 q.
Sodium Sulphate—
Christiania, 101 t.
Drontheim, 100
Hernosand, 274
St. Petersburg, 20 7 c. 1 q.
Sulphur—
Gothenburg, 340 t.
Superphosphates—
Christiania, 30 t. 1 c.
Tallow—
Genoa, 6 t. 12 c. 2 q.
White Lead—
Montreal, 61 t. 13 c.
New York, 2 10
Oporto, 16
Pomaron, 12 2 q.
Stockholm, 10 6
Wood Pulp—
Bergen, 40 bls.

GOOLE.

Week ending May 3rd.

Chemicals (*otherwise undescribe*)
Amsterdam, 1 cs.
Hamburg, 42 cks. 5 pks.
Coal Products (*otherwise undes.*)—
Amsterdam, 62 cks.
Antwerp, 12 2 cs 20 dms.
Boulogne, 51 3 4
Ghent, 1
Hamburg, 9 1
Rotterdam, 11 1
Coal Products—
Pitch
Antwerp, 874 t.
Dyestuffs (*otherwise undescribed*)
Hamburg, 60 bgs.
Painters' Colours—
Antwerp, 1 ck.
Boulogne, 2 2 cs.
Ghent, 1
Rotterdam, 1

GRIMSBY.

Week ending May 6th.

Alkali—
Antwerp, 20 cs.
Dieppe, 4
Hamburg, 23
Port au Prince, 474 dms.
Caoutchouc—
Helsingborg, 60 cs.
Port au Prince, 8 pks.
Chemicals (*otherwise undescribed*)
Antwerp, 3 cks.
Dieppe, 12 kgs.
Coal Products (*otherwise undes.*)—
Dieppe, 112 cks. 6 pks.
Rotterdam, 25
Dyestuffs (*otherwise undescribed*)
Malmo, 1 cs.
Glucose—
Christiania, 50 brls.
Painters' Colours—
Antwerp, { 6 kgs. / 12 cks. 1 cs. 2 pks.
Hamburg, 1
Rotterdam, 1

PRICES CURRENT. WEDNESDAY, May 17, 1899.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9	&	8/3
,, Glacial .. .. ,,		35/-	
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¼
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	9
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	0	11½
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	1
Tartaric .. .. ,,	0	1	0
Arsenic, white powdered .. .. nett per ton	19	0	0
Alum, loose lump .. .. ,,	4	5	0
Alumina Sulphate (pure) .. .. ,,	3	15	0
Aluminoferric .. .. ,,	2	2	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2¾
,, = 24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3¼
,, Muriate .. .. per ton	18	15	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	12	11	3
,, ,, (grey) Hull .. .. ,,	12	7	6
Aniline Oil (pure) .. .. per lb.	0	0	4½
Aniline Salt ,, ... ,,	0	0	4
Antimony .. .. per ton	39	5	0
,, (tartar emetic) .. .. per lb.	0	0	8
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	4	5	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6¼
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. ,,	17/-	to	2:/-
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	7
,, 50/90 ,, ... ,,	0	0	7½
Carbolic Acid (crude 60°) .. .. ,,	0	1	11½
,, (crystallised 40°) .. .. .. per lb.	0	0	6¾
,, (liquid 95/97%) .. .. .. per gallon	0	1	0
Creosote (ordinary) .. .. ,,	0	0	3½
,, (filtered for Lucigen light) .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	3	0	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	5	0
Solvent Naphtha, 90% at 160° .. .. per gallon	0	0	10
Copper .. .. per ton	78	10	0
,, Sulphate .. .. ,,	26	10	0
,, Oxide (copper scales) .. .. ,,	57	0	0
Glycerine (crude) 80% .. .. ,,	24	10	0
,, (distilled S.G. 1250°) .. .. ,,	48	10	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	2	6
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	15	10	0
,, Litharge Flake (ex ship) .. .. ,,	17	0	0
,, Acetate (white ,,) .. .. ,,	24	0	0
,, ,, (brown ,,) .. .. ,,	18	10	0
,, Carbonate (white lead) pure .. .. .. ,,	18	10	0
,, Nitrate .. .. ,,	22	10	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	4	17	6
,, ,, (grey) (ex ship) .. .. ,,	8	0	0
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton	9	10	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	14	15	0
,, Borate .. .. per cwt.	2	0	0
,, Ore, 70% .. .. per ton	3	10	0
Methylated Spirit, 61° O.P .. .. per gallon	0	2	0
Naphtha (Wood), Solvent .. .. ,,	0	3	0
,, ,, Miscible, 60° O.P. .. .. .. ,,	0	3	9
Oils:—			
Cotton-seed .. .. per ton	17	10	0
Linseed .. .. ,,	19	10	0
Stearine .. .. ,,	26	0	0
Phosphorus (Yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	15	0
,, Chlorate .. .. per lb.	0	0	3½
,, Cyanide, 98 % .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) 90 % .. per ton	22	0	0
,, ,, .. 75/80 % .. ,,	17	15	0
,, Potash Hydrate Liquid 50 % .. .. ,,	11	5	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	2	12	6
,, Prussiate Yellow .. .. per lb.	0	0	8¼
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	0
,, Muriate, 80 % ,, ... ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	4½
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % .. nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	5	0
,, ,, (Carb. Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Soda Crystals) .. .. .. ,, ,, (f.o.r. w'ks.)	2	10	0
,, Acetate (ex-ship) .. .. ,,	12	15	0
,, Arseniate, 45 % .. .. ,,	13	10	0
,, Chlorate .. .. per lb.	0	0	3¾
,, Borate (Borax) .. .. nett per ton	16	0	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton (10 ton lots)	7	12	6
,, ,, (74 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	0	0
,, ,, (60 % Caustic Soda) .. ,, ,, (10 ton lots)	6	0	0
,, ,, (pure liquor 90° Tw.) .. ,, ,, (10 ton lots)	3	10	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate (cwt. kegs) .. .. ,,	6	15	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25 % .. .. ,,	15	10	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	9
,, Nitrite, 98 % .. .. per ton	26	0	0
,, Phosphate .. .. ,,	10	7	6
,, Prussiate .. .. per lb.	0	0	6¾
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	10	0
,, Stannate, 40 % .. .. per cwt.	3	10	0
,, Sulphate (Salt-cake) .. .. per ton	1	7	6
,, ,, (Glauber's Salts) .. .. .. ,,	1	12	6
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	5	0	0
Strontium Hydrate, 100 % .. .. ,,	9	10	0
Sulphocyanide Ammonium, 95 % .. .. .. per lb.	0	0	5¾
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton	6	15	0
,, (Roll Brimstone) .. .. ,,	6	0	0
,, Brimstone: Best quality .. .. ,,	4	12	6
Superphosphate of Lime (26 %) .. .. ,,	2	10	0
Tallow .. .. ,,	24	0	0
Tin Crystals .. .. per lb.	0	0	7⅞
,, English Ingots .. .. per ton	121	5	0
Zinc (Spelter) .. .. ,,	28	10	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	7	10	0
,, Sulphate, Crystal .. .. ,,	7	15	0

THE

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AND

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Advertisements intended for *insertion* in the current week's issue should reach the office by **Thursday morning** at the latest.

CURRENT TOPICS.

OUR COAL RESERVES.

THERE appears to be some need of an apology for introducing the question of the future "life" of our coal reserves, seeing how often economists have warned, threatened, and cajoled the nation anent this subject; but we think we may safely say that this need no longer obtains, if, by way of preface, we remark that, without sharing in full the pessimistic forecasts of Prof. Jevons and others, we firmly believe that it is only by facing the possibilities of the future we can hope to cope with the increasing competition of neighbouring countries. Our output and export of coal are increasing yearly. The recently issued returns for 1897 show that 6,769,000 tons more coal were raised than in 1896. Looked at from a coal trade point of view, this is encouraging, and the fact that the American output is beginning to approximate to our production is to be regretted; but there is another view point. Every ton of coal raised is gone for good, and as our industrial supremacy has rested largely on our vast and readily accessible coal stores, it is a question whether it is not as well that America can nearly more than supply her own needs.

The cost of getting coal is less in America than at home, and this point is one which does not grow more hopeful as we look ahead. There may be plenty of coal to be relied on for the future, so that the ominous rumours of exhaustion that come from Lancashire and the North, may very likely be silenced by pointing to the new Kent coalfield; but everything seems to point to the fact that these new coal measures are all less accessible than those that are giving out, and consequently we must expect the cost of winning the coal to increase rather than decrease. In other words, the special advantages which we have hitherto profited by as compared with other nations are gradually disappearing, even if our actual coal supplies are not. This levelling off of our privileges makes it highly needful for us to turn to account all other available sources of energy, and endeavour to utilise our present waste products.

A CONTRAST IN STRIKES.

When the recent coal dispute was in progress in Wales, both moral and monetary support was afforded to our workers from Germany and Belgium. At the time there was considerable comment upon the motives that actuated the Belgian miners, because the stoppage in Wales was, without doubt, causing great activity in Continental iron and coal districts. Thus, indirectly, it was also putting money into the pockets of those who, not unnaturally, were willing to provide the sinews of war in order that the struggle here might be perpetuated, and the then existing status maintained as long as possible.

When *they* indulge in strikes, however, there is not the same reciprocity. The Lorraine dispute of the past week or so pro-

mised to result in a determined stand. The men demanded an increase of 20 per cent. in wages, the introduction of wages books, and the establishment of workmen's committees. The Belgian and French employers saw that the situation was acute, but were as firm as the men.

In a very short space of time the usual complications began to arise, and matters began to look serious when one firm of iron and steel manufacturers in Alsace-Lorraine shut down, and dismissed 5,000 men, because of the shortage of coal. This sort of thing foreshadowed distress, such as we have experienced here in such crises, and no doubt the coffers of our Unions would have been opened in due course to make a practical return for the assistance we had received in troublous times. There was no need to do this, however, for when it became necessary to adopt extreme measures, a conference was easily and speedily arranged. In return for the 20 per cent. asked, the masters offered a meagre 5 per cent.; but instead of refusing it point blank (as would almost inevitably have been the case here) there was thankfulness for small mercies, and nearly all of the miners are back again at work.

Now, what was the reasoning that induced them to give in so soon—cowardice or worldly wisdom? Those who know anything of the German miners will hardly credit the former supposition. Why, then, did they not follow the noble example of their British fellow workers and prolong the fight, trusting to outside alms to keep them from destitution, and revelling in the utter dislocation of their national industries? It would not, perhaps, be a difficult thing for them to give an explanation, but we rather imagine the only answer to those who put the question would be the tolerant smile of one who is amused at the imperception and irreflection of his interrogator. And yet that smile would be pregnant with meaning to one who could interpret it. Will Messrs. Mann, Tillet & Co. endeavour to?

DECADENCE OF BRITISH MINING.

FOREIGN COMPANIES WORKING ABANDONED MINES.

DR. C. LE NEVE FOSTER, her Majesty's Inspector of Mines for the North Wales district, in his annual report which was issued last week, after stating in that section dealing with works under the Metalliferous Mines Regulation Act that he has removed from his list the names of eighteen mines that have been abandoned, says:—"I cannot pass over in silence the fact that several foreign companies have lately purchased mines in my district with the object of reworking them. Though I welcome the advent into Wales of the famous Vieille Montagne Company, for I have hopes that its methods of mining and dressing will form useful object lessons to us, I am not blind to the slur which is cast upon us as a mining nation. If such a capable body of commercial men as the directors of the Vieille Montagne Company propose ro resuscitate some of our abandoned mines, it may be taken for granted that they consider the enterprise as likely to be profitable. Is our mining talent so far behind the times that foreigners can make a profit out of mines which we have abandoned as worthless? If so, the technical skill of Continental mining engineers is of a higher nature than that of our own people, and we are not keeping pace with the times. It therefore behoves us as a nation to get out of the grove of the

SLOVENLY OLD-FASHIONED METHODS

of working ore mines, which linger so long in this country, and to give mining superintendents and mining foremen such technical training as will render them at least the equals of their Continental competitors. A feather will show which way the wind blows, and I think it my duty to call attention to a first sign of decadence, with the hope that a remedy may be applied before the patient is beyond all hopes of recovery." Dr. Foster adds that the British ore miner too frequently thinks that his only hope lies in better prices for metals; but the best advice that can be given him is that he should cheapen the cost of production by making use of all the resources which science is daily bringing within his reach. The inspector suggests the formation in his district of a technical society, to meet from time to time in various places, for the purpose of discussing questions relating to mining and quarrying, thus bringing together the managers of mines and quarries, and promoting a useful interchange of ideas. Considering that Carnarvonshire has some of the largest quarries in the kingdom, that Merionethshire as a mining county approaches Cornwall in importance, and that Flintshire and Denbighshire can boast of valuable lead and zinc mines, in addition to their extensive open-workings for stone, he is convinced that there is no lack of valuable experience to be unfolded and useful subjects for discussion. Elsewhere in the report Dr. Foster expresses the view, formed after having gathered information upon the question when visiting Germany last year, that we are behind our neighbours in regard to the industrial uses of electricity at mines and quarries.

FUTURE OF THE NITRATE INDUSTRY.

IN addressing the shareholders of the Santa Rita Nitrate Co., Ltd., the chairman (Mr. H. Low) contributed the following opinions as to the probable prospects of the industry:—So far as combination is concerned, embracing every individual producer, we are as far off as ever; but I do not think we need, on that ground, be unduly despondent. We all, in the nitrate trade, feel convinced that very important developments are about to come upon us. We may fairly look upon last year as one of the most severe tests that any nitrate company is likely to experience for a long time to come, and we find, happily, that we have now reached that point where, by natural means and without any artificial devices whatever, consumption has arrived at the equivalent of production.

LABOUR REGULATES THE OUTPUT.

The difficulties which we have experienced, and are experiencing now, in Chili with regard to labour show us that the limit of production for some time to come, at least, has been arrived at, so that any producer who desires to produce more than he is doing now can only do so by withdrawing workmen from other oficinas, and so reducing their output in an equal ratio to his increase. Well, I consider that the continuous advance in the consumption of nitrate is the very backbone of the future prospects of the nitrate producers, and although a combination would have materially assisted us in the past two years, I think we shall not do so badly without it as some people seem to imagine; for I feel convinced that, in the ordinary course of events, this important industry will before very long emerge from those dark clouds which have surrounded it, and will come forward to rank among the first and most profitable industries of the whole world. From a consumption of 24,000,000 quintals in 1895 we have now arrived at a consumption of 28,000,000 quintals in 1898, and, thanks to the activity and energy of the propaganda committee and their delegations in foreign countries, new openings are being made in all parts, and the advantages gained by the use of nitrate by agriculturists are being shown more prominently than ever. We see the effect of their work by the increased demand from those countries where the propaganda is being effectively worked, and that being so we have great hopes that the continuous increase to which I have alluded will go on as before, and by that means we shall get rid of that great bugbear, which has hung around our necks, of having a larger production than we could get rid of. However, we must not forget that while this increasing demand and consumption goes on we are depleting our reserves. Nitrate is a thing that is possible of exhaustion, and therefore it behoves us to be the more careful at the present time to do everything we can to save our own position, and not to throw away our production at the mere price of its cost, thus losing the future benefit which I feel certain will shortly come upon us in the market price of the article Efforts are now being made to bring the whole trade into line, and if the English companies would only come to an agreement among themselves as to the future of the article, they could at the present moment easily raise the price by 10s. a ton, which would mean an increased profit on their capital of £250,000. I ask you, is not this worth working for? And yet we find—at least, we have found it hitherto, though we hope we shall not in the future—that amount of supineness on the part of those interested in the conduct of nitrate affairs which makes it difficult to impress anything whatever upon them. They are the most lethargic body in action; they are very active in thought and speech, but they will not act. I hope they will now be convinced by the present state of things that this is a most opportune moment to take the matter in hand, and that if they do take it in hand promptly the position can be saved and this industry brought to the most successful point that any of us could wish to have it brought.

CHANGE OF ADDRESS.—We are requested to notify that Locke, Lancaster and W. W. and R. Johnson & Sons, Ltd., have removed to new offices, and that on and after 23rd May, letters and all communications should be addressed to 94, Gracechurch-street, London, E.C. The new offices are at the Leadenhall-street end of Gracechurch-street, within two doors of the Gracechurch-street entrance of their present offices.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Oil Burners or Heaters. C. and A. Musker and W. G. Hay. 9,627. May 8.
Leather Substitute. J. F. Roulleau. 9,661. May 8.
Siccative Oil from Petroleum. W. L. S van Loo. 9,689. May 8.
Smoke-consuming Apparatus. G. S. de Ritter and C Cooper. 9,701 May 9.
Ozonising Water, etc. C. F. C. Hellmering, jun., and F D. Knoop. 9,740. May 9.
Treating Peat and Coal. W. M. Gillam. 9,774. May 9.
Explosives. R. C. Parsons and D. W. Nightingale 9,785 May 9.
Manufacture of Copper Sulphate. H. Pallas and F. Cotton. 9,806. May 9.
Artificial Stone. C. W. Stevens. 9,816 May 9.
Manufacture of Ammonium Sulphate and Extraction of Cyanogen. G. Wilton. 9,883. May 10.
Manufacture of Saccharine. G B. Ellis. 9,962. May 11.
Non-Phosphoric Match-tipping Composition. N. T. Trexidor. 9,992. May 11.
Explosives. A. Luck. 9,996. May 11.
Ozone Apparatus. J. H. Lamprey. 10,035. May 12.
Detecting Gas Leakage. A. Woodmansey and Brins Oxygen Co., Ltd. 10,039. May 12.
Explosives. H. S. Maxim. 10,071. May 12.
Recovering Solvents from Proofed Hat-bodies. W. B. Hart and A. Ashworth. 10,100. May 13.
Grinding and Mixing White Lead Paints, etc. T. and J. R. Torrance. 10,107. May 13.
Manufacture of Ammonium Nitrate. J. W. Kynaston. 10,137. May 13.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

An Improved Composition for Use in Treating Sewage or other Liquids. J. Hastwell, 8, Mackinnon-street, Rochdale. Eng. Pat. 8,941 April 18, 1898.

The composition is composed of 6 per cent. soda alkali, 2½ per cent. copperas, 1½ per cent. alum, ½ per cent. muriatic acid, ¼ per cent. chloride of lime, and 6 per cent. milk of lime. This composition is dissolved in water at 50° F., or thereabouts, and added to the sewage. Special cakes for treatment in the cold are prepared by substituting 2 per cent. quicklime, 1 per cent. each of French chalk and Paris white, and ½ per cent. of charcoal for the milk of lime. The soda, copperas, and alum are dissolved in boiling water, then the acid and other ingredients added, and the whole run into moulds to harden.

Improvements Relating to Gypsum or Plaster of Paris. W. R. Johnson, 9, Dunn's-lane; G. Nichols, 11, Prebend-street, both of Leicester. Eng. Pat. 10,658. May 10, 1898.

Old plaster moulds which formerly were worthless are utilised by powdering and reviving the setting properties in the following manner:—The used-up moulds are first broken into small lumps, then burnt at a moderate temperature in a kiln. While still warm the mass is sprinkled with an 8 per cent. solution of sulphuric acid and dried. After grinding finely it possesses the properties of ordinary plaster of Paris, only it takes a little longer to set, and sets harder. The colour is a little darker, but this is immaterial when used for moulds.

Improvements in Connection with Filter-beds for Filtering Sewage Water or other Liquids. R. O. Wynne-Roberts, Oswestry. Salop. Eng. Pat. 13,697. June 20, 1898.

This invention deals with mechanical contrivances for automatically charging and discharging filters. Several filters are arranged near each other, and all discharge into a chamber common to them all. The valves are operated by a tilting bucket, which is worked by the filtered effluent. Thus, when the liquid in the filter reaches a certain height it raises a float, which opens a cock and lets off enough water into the bucket, which in turn operates the valves. There are six figures.

Improvements in the Extraction of Cyanogen from Coal Gas. J. Büeb, 11, Kaiserstrasse Dessan. Eng. Pat. 9,075. April 19, 1898.

The cyanogen compounds are removed by a scrubber charged with ferrous chloride or ferric sulphate solution interposed between the tar separator and the ammonia scrubber. Solutions ranging in concentration from 3 per cent. up to 20 per cent. may be used. The cyanogen compounds are thus separated as an insoluble precipitate, while the gas, charged with such ammonia as has not entered into reaction, passes on to the ammonia scrubber proper, in which the formation of mud is obviated by this method. The solution of iron from the scrubber is boiled briskly so as to throw down any double salts of cyanogen in the insoluble form, and the combined precipitates are separated by filtration, thus giving a product which can readily be converted into marketable cyanogen compounds. Any dissolved ammonia salts in the filtered solution from the iron liquor scrubber may be liberated by evaporation.

Improvements in Electrolytical Apparatus. J. Loiselet, 58, Chaussée d'Antin, Paris. Eng Pat. 22,872. Oct. 31, 1898.

Electrolytic troughs are built up of sheets of vulcanised fibre, supported by outer sheets of perforated metal. The advantage lies in preventing the porous walls warping, so that very narrow compartments can be used, thus reducing the thickness of the layer of electrolyte, and economising electrical energy. There are three figures.

Improvements in the Treatment of Sewage. F. M. and D. D. Spence, Manchester Alum Works, Manchester. Eng. Pat. 11,463. May 20, 1898.

This is a modification of patent 3,450, 1898 (*C. T. J.*, 617, p. 187), by which sewage is treated with alumino ferric and neutralised with vitriol, thus separating the fats, etc, with the sludge. It is also claimed that by this treatment the effluent is both suitable and useful as a fertiliser for irrigation purposes, the nitrogen being worth (at the present price of ammonium sulphate) £9. per 1,000,000 gallons of effluent. The process only applies to alkaline sewages.

THE CANADIAN NICKEL INDUSTRY.

THE nickel industry is the all-engrossing topic among Canadians at the present moment. The astonishing discoveries that are daily taking place of her immense wealth in all the most valuable minerals have already attracted the cupidity of the world, and it is well that Canadians are now fully alive to their rich heritage. Hitherto our southern neighbours, unable to force Canada into annexation, have sent their emissaries to spy out the land and grab every good thing in sight in our fair Dominion. Among many others is notably that of our great nickel deposits in the Algoma district, of which Canada has practically a monopoly. Not content with acquiring a large portion of this valuable property at a trifling cost, the American Congress has deliberately legislated so that three-fourths of the labour in extracting the pure metal from the ore should be done in their own country.

We could fill many columns with the history of these transactions. A few tabulated figures, however, derived from unquestionable, reliable authorities will give the intelligent reader an idea how abominably Canada has been treated.

ANNUAL PRODUCTION OF NICKEL AT SUDBURY (ONT.)

Date.	Lbs. of Nickel.	Price.	Value Finished.	Value when Exported.
1889	830,477 ..	60c. ..	$498,286 ..	$74,742
1890	1,435,742 ..	65c ..	933,232 ..	89,568
1891	4,626,627 ..	60c. ..	2,775,976 ..	667,280
1892	2,413,717 ..	58c. ..	1,399,956 ..	293,149
1893	3,982,982 ..	52c. ..	2,071,151 ..	629,692
1894	4,907,430 ..	38½c...	1,870,958 ..	559,356
1895	3,888,525 ..	35c ..	1,360,984 ..	521,783
1896	3,397,113 ..	35c. ..	1,188,990 ..	658,213
1897	3,997,647 ..	35c. ..	1,399,176 ..	699,588
	29,480,260		$13,598,709	$4,193,371

The latter column is the spot value when exported as entered by the operators, and depends upon the particular stage to which they happen to carry the process of extraction, whether the shipments are made in raw ore, low or high matte. Taking the above figures, furnished by the company to our Government, and probably much below the quantity, it will be seen that Canada has been despoiled of labour on this property alone in eight years of $9,405,338. That this was a deliberate act of the United States Congress was evidenced in 1890, when the McKinley Tariff was framed, when nickel ore and matte were placed on the free list. The obvious reason for so doing was stated by Mr. McKinley himself subsequently under oath in these words:—

"It is very doubtful whether we had any considerable quantity of nickel in this country, and as we understood there were great mines in Canada, on the principle we were framing the Bill we had either to put it on the free list or reduce it to a revenue tariff."

Thank goodness, Young Canada is awakening rapidly to these facts, and will in the near future demand with no uncertain sound, protection by its Government of the vast interests involved in the mineral wealth of the Dominion.—*Canadian Mining Gazette.*

Photographic Notes.

THEORY OF THE ACTION OF PERSULPHATE OF AMMONIA ON PHOTOTYPES.

[By MM. August and Louis Lumiere.]

When we notified to the public the curious property which persulphate of ammonia possesses, viz., of reducing the density of phototypes by exercising its reducing action preferentially on the more opaque parts of the image, preserving the half-tones at same time, *i.e.*, acting from the base of the emulsion to the surface, we stated a theory which has since been the object of various contradictions.

We admitted actually that persulphate of ammonia dissolves the silver of the image by giving a double sulphate of ammonia and silver, according to the following equation :—

$$SO^4(NH^4) + Ag = SO^4 \begin{cases} Ag \\ NH^4 \end{cases}$$

We assumed that this double sulphate diffused gradually from its formation over the base of the gelatine in the exterior liquid containing the excess of persulphate, and that this latter could play, in this case (like oxygenised water) in the presence of water, the rôle of reducer by simply generating its oxygen after the following equation :—

$$2(SO^4NH^4) + 2(SO^4 \begin{cases} NH^4 \\ Ag \end{cases}) + 2H^2O = 2SO^4HNH^4 + \overline{Ag^2} + O^2$$

So that outwardly the dissolving action of persulphate on silver, being impeded by the tendency to produce the inverse re-action, would give rise to the precipitation of silver on the surface of the image. We explained therefore the reason why the intensity of the image would be affected from the base to the surface and not in an inverse manner, as would ordinarily be the case.

Professor Namias (in the Bulletino della Soc. Fot. Italiana, page 293, 1898) pretends that our hypothesis is not exact, because the persulphate of ammonia does not reduce the nitrate of silver if there is a small quantity of soluble silver salt in presence of an excess of persulphate of ammonia, which is the case when a negative is plunged into the re-agent. Now, the reduction not taking place except in the presence of an excess of soluble silver salt, Professor Namias does not admit the possibility of a silver deposit on the phototypes.

In order to confirm our first hypothesis, we prepared directly double sulphate of silver and ammonia, by dissolving up to saturation, precipitated silver in persulphate of ammonia at 5 : 100.

We found that this double soluble silver salt and ammonia can (in the presence of any reducer like pyrogallic acid or hydroquinone, for instance) deposit effectively metallic silver on a negative—that is to say, it can play the rôle of physical intensifier, without which the silver would be directly reduced in the solution, which remains limpid when cold during a sufficiently long time, and which gives the silver to the negative as soon as it is put in this bath.

The precipitation of soluble silver salt on the negative can therefore be admitted without this re-action taking place directly on the surface of the liquor, and consequently this remark does not disprove our original and first hypothesis. Messrs. Fuerst Brs., of 17, Philpot-lane, will be glad to supply further information.

AN INTERNATIONAL PHOTOGRAPHIC PAPER.

A striking proof of the universal interest taken in photography is furnished by the issue of an international journal devoted exclusively to this subject. Its title will be "Camera Obscura"—an International Review of the Photographic Arts—and it will be published in four languages, English, French, German, and Dutch, thus covering practically the whole civilised world.

The "Camera Obscura" will treat exhaustively on every subject pertaining to the employment of camera and lens, applied to pleasure, science, art, and commerce. The reading matter will be profusely illustrated, and specimen photograms, the work of celebrated exponents, will appear in each issue. Special supplements will frequently be presented, and the portrait gallery will introduce famous knights of the camera, selected solely upon the merit of their productions. 50,000 copies will be printed of the first number, to be published in June, and the publishers for Great Britain and the Colonies are Messrs. Williams and Norgate, London, Edinburgh, and Oxford.

Errata.—In our issue of May 6th we gave a translation of some notes on the "Analysis of Glue," by Richard Kissling, in connection with which the name of the "Chemiker Zeitung" should have been mentioned but was accidentally omitted. The article in question was originally contributed to Dr. Krause's organ.

IMPORTS AND EXPORTS FOR APRIL.

The Board of Trade returns for the past month are fairly satisfactory. In the *imports*, chemicals are less in value, though borax and manures show an increase. The *exports* of alkali and copper sulphate are lower, as are chemicals in general, but salt and chemical manure showed an improvement.

IMPORTS OF FOREIGN AND COLONIAL PRODUCE.

Articles.	Quantities. 1898.	1899.
Margarine ..... Cwt.	79,240	75,127
Copper Ore and Regulus..... Tons	11,300	7,056
Pyrites..... ,,	64,320	59,982
Tin ..... Cwt.	16,816	31,450
Alkali ..... ,,	15,517	11,554
Brimstone ..... ,,	36,386	28,729
Dyes, Coal Tar ..... £.	55,953	58,938
Saltpetre ..... Cwt.	31,123	24,899
Petroleum ..... Gall.	13,972,963	22,387,679
Turpentine ..... Cwt.	33,566	15,715
Guano..... Tons.	795	3,033
Nitrate of Soda ..... ,,	23,983	27,513
Paraffin Wax..... Cwt.	98,285	97,833
Rosin ..... ,,	77,700	87,694
Tallow and Stearine..... ,,	207,796	233,491
Tar..... Barrels	2,422	2,536
Oil Seed Cake ..... Tons	33,429	46,263
Wood Pulp..... ,,	33,059	30,382
Borax ..... Cwt.	416	24,246

EXPORTS OF BRITISH AND IRISH MANUFACTURES.

Articles.	Quantities. 1898.	1899.
Alkali ..... Cwt.	297,958	286,202
Cement ..... Tons.	29,783	23,386
Coal and Coke ..... ,,	2,601,256	3,455,109
Copper, all kinds ..... Cwt.	81,300	59,975
Iron and Steel ..... Tons.	282,046	278,464
Chemical Manures ..... ,,	32,108	36,985
Oils, seed ..... ,,	4,195	3,091
Salt ..... ,,	45,326	59,423

OPENINGS FOR CHEMICAL TRADE IN SPAIN.

Matters seem settling somewhat in Spain and in consequence Mr. C. Talbot, H.M. Consul for Corunna and district, points out in a recent report that there are several openings for the chemical and fertiliser trades in this district.

The province of Asturias is daily extending the cultivation of beetroot to meet the demand of three large sugar factories being built in this district, and it is calculated that 10,000 to 12,000 tons of superphosphate will be required during 1899. France imported 28 tons, Belgium 1,740 tons, and Great Britain nil in 1898.

It is to be hoped that British chemical manufacturers desirous of extending their foreign trade will take due note of this very unsatisfactory statement, and endeavour to obtain a footing for the growing quantities of manures wanted, which ought to contain 14 to 16 per cent. of phosphoric acid.

Evidently we are not well posted as to the requirements of Asturias, nor does it appear that the repeated references made from this office to the capabilities of this market, as an outlet for more British products, receive due attention at home, otherwise it is difficult to understand why such an important centre is ignored.

A chemical works on the East Coast has entered into a contract for 1,000 tons of superphosphate through a French house, and in the hope that further contracts will be made direct, we give below names and addresses of the principal importers: Senor Director, Sociedad Azucarera Asturiana, Gijon; Senor Director, Sociedad Azucarera, Villaviciosa, Asturias, (Spain); Senor Director, Sociedad Azucarera, Lieres, Asturias (Spain); Senor Director, Sociedad Azucarera, Villalegre, Aviles; and it is worth noting that beetroot growing is making great progress throughout Spain, especially since the loss of the colonies, and that a merchant of Gijon, Don Casimire Velasco, supplies several districts with chemical manures, hitherto imported from Belgium.

BEETROOT INDUSTRY.

The cultivation of beetroot in the province of Galicia has been attracting the attention of capitalists in this district considerably since

my report of last year, and some of the leading merchants and bankers have been forming syndicates in this and other places for the purpose of making inquiries, choosing suitable tracts of country for its growth, and eventually establishing sugar factories.

The farmers will benefit largely by the increased price to be paid for the root, and in addition will be educated in the application of chemical manures, and use of modern agricultural implements, as each new factory has purchased large areas of land which will be cultivated upon scientific principles to show the farmer the advantages of adopting modern improvements.

As regards competition, the "bulls," to use a Stock Exchange expression, state that they are not afraid of it, some 150,000 tons of sugar being consumed in the Peninsula and only about 50,000 tons manufactured in the country. That although it is said that to supply sufficiently the factories now working in Asturias it would be necessary to grow beet in Galicia, and admitting that the profits made are not great, they would still be further reduced by the expenses of transport from Galicia, which would be avoided by a factory erected on the spot. Also sugar manufactured in the province, thus escaping costs of transport, octroi duties, &c., could be sold at a cheaper rate than that introduced from other parts of the Peninsula. Other most important factors in its favour are that one of the greatest sources of the wealth of Galicia is cattle, and these could be fed almost all the year round on the leaves and pulp or residue of the beetroot, which could be sold to the peasants at a moderate price.

MINOR OPENINGS.

Great Britain is equally behind other nations in substances employed in pharmacy, perfumery, and chemical industries.

Glasgow and other manufacturers of *mineral and vegetable wax* will please note that a new candle works will be opened this spring, and that the quantity imported in 1898 (128 tons) will be considerably increased. Messrs. R. Dien & Co. and Messrs. Oliver Hermanos, both of Gijon, are the chief consumers.

The native potteries, glass, and explosive works imported, in 1898, 252 tons of carbonate of soda, of which Belgium sent the bulk; Great Britain, 20 tons; and France, 4 tons.

Sulphate of Soda all came from Belgium.

Nitrate of Soda came in larger parcels in 1898, when France imported 519 tons; Belgium, 30 tons; and Great Britain, nil.

The importation of *sulphur* in 1898, 31 tons, is credited to—France, 21 tons; and Belgium, 10 tons.

Great Britain imported, in 1898, 10 tons out of a total of 70 tons of *sulphuric ether*, France, Germany, Holland, and Belgium sent the balance.

For colour-making *oxide of iron* was in demand; 490 tons were exported in 1898, England taking 322 tons and France 168 tons.

Some of the existing mines have shown signs of improvement, amongst them the Sagasta gold mines, situated between Corunna and Corcubion, about 30 miles from the former.

New machinery has been erected, the gold being extracted by the cyanide process, which so far has proved a success, and consignments of gold are being sent to England.

IMPORT AND EXPORT TRADE.

The importation of chemicals and drugs is a trade of much importance, as the following statistics show :—

Articles.	1897.		1898.	
	Currency.	Sterling.	Currency.	Sterling.
	Pesetas.	£	Pesetas.	£
Simple drugs	15,260,299	610,000	9,882,184	395,000
Colours, dyes, varnishes.....	10,133,357	405,000	9,712,708	388,000
Chemical & pharmaceutical products	26,672,600	1,067,000	26,354,474	1,054,000
Wax, soap, etc. ..	6,728,360	269,000	6,249,898	250,000
Perfumery.... .	1,389,600	55,000	1,040,264	41,000
Total	60.183,616	2,407.000	53,239,528	2,129,000

The value of the importation of simple drugs is largely dependent on the quantity of rape, flax and other oleoginous seeds landed in Spain, and of these the value of the importation was 4,000,000 pesetas (£160,000.) less than in the previous year. These oleaginous seeds are imported principally from the Philippine Islands and French and British possessions in Asia. Half the entire importation in 1897 which was valued at 11,000,000 pesestas (£440,000.) was imported via France, although less than the value of 2,000,000 pesetas (£80,000.) was of French origin. The value of 1,500,000 pesetas (£60,000.) was sent from England in the same year, of which less than the value of 1,000,000 pesetas (£40,000.) was of British origin.

Dye-woods are imported principally from Portugal and Mexico. The total value of tanning barks was valued at about 250,000 pesetas (£10,000.) in 1897, and of this only the value of 6,000 pesetas (£240) was of British origin.

In the import of *Colours and Varnishes*, valued at about 10,000,000 pesetas £(400,000.), Great Britain only supplied the comparatively small proportion of goods valued at 400,000 pesetas (£16,000), and only in varnishes and prepared paints does England occupy the leading place in the trade.

Dyeing extracts were imported from France in 1897 for the value of 1,500,000 pesetas (£60,000.) out of a total of 2,400,000 pesetas (£96,000).

Colours in powder, valued at 931,000 pesetas (£37,000.) in 1897, were imported from Germany for the value of 340,000 pesetas (£13,000.); from Belgium for 265,000 pesetas (£10,000.); from France for 170,000 pesetas (£6,800.); and from England for 92,000 pesetas (£3,700.).

The most important of the *Chemicals* imported into Spain are alkaline carbonates and nitrate of soda, which were valued in 1898 at 5,741,000 pesetas (£230,000.) and 11,085,000 pesetas (£443,000.) respectively. Of the carbonates, the value of 4,200,000 pesetas (£168,000.) was imported from Great Britain, 1,350,000 pesetas (£54,000.) from France, and 550,000 pesetas (£22,000) from Belgium, in the year 1897. Of nitrate of soda, the value of 7,850,000 pesetas (£314,000) was imported from England, 1,200,000 pesetas (£48,000.) from France, and 710,000 pesetas (£28,000.) from Belgium.

In common *soap*, the value imported in 1897 was for 61,000 pesetas (£2,500.), of which the value of 52,500 pesetas (£2,000.) was imported from England.

Wax and paraffin, etc., valued in 1897 at about 3,000,000 pesetas (£120,000.), was imported from England for about 1,000,000 pesetas (£40,000.), from Germany for 600,000 pesetas (£24,000.), and from Austria, Belgium, and the United States in considerable quantities.

Natural *manures* were valued at 3,000,000 pesetas (£120,000.), and nearly half of that quantity was imported from France; Germany supplied these manures for over 1,000,000 pesetas (£40,000.). Artificial manures were imported for the value of nearly 10,000,000 pesetas (£400,000), and were supplied by France for 4,400,000 pesetas (£176,000.), by Great Britain for 3,500,000 pesetas (£140,000.), and Germany for 1,800,000 pesetas (£72,000.).

THE EXPORT OF DRUGS

shows little variation from year to year. The following table gives the value of the principal classes exported during the last two years :—

Articles.	1897.		1898.	
	Currency.	Sterling.	Currency.	Sterling.
	Pesetas.	£	Pesetas.	£
Simple drugs	7,718,143	308,000	7,729,080	291,000
Salt	3,550,409	142,000	3,283,515	131,000
Chemical products	5,719,655	229,000	6,528,601	261,000
Wax, Soap, &c.	6,211,207	248,000	4,837,942	193,000
Perfumery	661 616	26,000	317,8.6	14,000
Total	23,861,030	954,000	22,291,954	891,000

The production of *salt*, which in 1897 had fallen from 521,751 tons in 1896 to 508,605 tons, showed a further decline last year. The exportation was as follows :—

Year.	Quantity—Tons.
1896	254,803
1897	235,871
1898	219,301

The salt mines of Ibiza and Torrevieja produced 80,000 and 85,000 tons respectively in the year 1898.

Of other chemical products *tartar* and *cream of tartar* were exported for the value of 6,200,000 pesetas (£248,000.) in 1898, as compared with 5,650,000 pesetas (£226,000) in 1897. Of this quantity in the year 1897, the value of 2,830,000 pesetas (£113,000.) was exported to France, and 1,310,000 pesetas (£52,000.) to England.

The production of *phosphorus* has just recommenced after some years, and in December last 1,000 kilos. were exported from Spain.

More Trusts.—Following hard upon the formation of the gigantic Steel Trust carried through in Chicago last week, the news comes from New York that a Cottonseed Oil Trust has now been formed with a capital of £1,200,000. It seems as if all the Princes of Finance are busy in the direction of trusts, but we wonder how far it is advisable to heed the ancient counsel of "put not your 'trust' in Princes?"

The Rhodin Process in the U.S.A.—We learn that a company is being incorporated in the United States under the title of the American Alkali Co., to work the Rhodin electrolytic process. The capital is stated to be very large, and a satisfactory sum has been subscribed for working expenses. Mr. Clerque of the Sault Ste. Marie Pulp and Paper Co. is largely interested. Arrangements are being made for supply of power from the Niagara Falls River Co.

Reports of Companies.

CASTNER-KELLNER ALKALI CO., LTD.

8 PER CENT. DIVIDEND

The report of the directors for the period ended March 31 last states that the works, consisting of four installations of 1,000 h.p. each, are now fully at work, and the plant and process are working satisfactorily. The total outlay on the freehold land, buildings, plant, and railways has been £292,818. The trading account shows a profit of £31,980., after having made adequate allowance for the efficient maintenance of the working plant. This has been earned by the running of the first installation for the whole year; the second for nine months, the third for six months, and the last installation was only fully completed just before the expiration of the year's working. The profit and loss account shows a net profit of £29,554, which, with £8,677. brought forward from last year, less directors' and auditors' fees for that year, amounting to £1,105., leaves £37,126. An interim dividend at the rate of £8. per cent. per annum, has been paid for the six months ended September 30 last, leaving an available balance of £25,126. Out of this the directors propose to pay a further dividend at the rate of £8. per cent per annum for the six months ended March 31, and to appropriate £2,784. in writing off preliminary expenses, which include £655. for the issue of debentures, to appropriate £5,000 for depreciation, and to carry forward the balance, amounting to £5,341.

SAN DONATO NITRATE CO., LTD.

The directors' report for the twelve months ended December 31 last states that the accounts show a loss of £4,942. The balance carried forward from the last account was £7,160., and deducting loss as above there is a balance at credit of profit and loss account of £2,217. to be carried forward. As no combination for the limitation of output has been formed, no nitrate has been made during the year, selling prices not having warranted the directors recommencing manufacture. The loss shown in the extract of profit and loss account was mainly incurred on realisation of the stores, to prevent further deterioration, and on sale of animals to save cost of maintenance. The iodine and caliche stocks are valued in the balance-sheet at cost price.

NOBEL-DYNAMITE TRUST COMPANY.

The profit and loss account for the twelve months ended 30th April, 1899, and the balance sheet at that date, duly certified by the auditors, show that the net profit for the year amounts to £266,612. 7s. 1d, and adding the sum of £13,158. 16s 1d. brought forward from last account, there is a total available profit of £279,771. 3s. 2d The directors recommend that £274,248. be applied in payment of a

DIVIDEND AT THE RATE OF 12 PER CENT.,

free of income tax, carrying forward £5,523. 3s. 2d. to next account. The results for the past year have in several respects been very satisfactory, but profits derived from the trade in blasting explosives have suffered further reduction by keen competition, which has extended to all the important markets. Depreciation, maintenance, and repairs have been met out of the revenue. Large amounts have been added to the premium accounts of the manufacturing companies during the year, derived from premium on the shares issued to us by them in increase of capital. The authorised capital of the company was raised to £3,000,000 by a special resolution passed at the last annual general meeting, and 30,000 new shares were issued and disposed of at a premium. The stamp duty on the increase of capital has been debited to profit and loss account, whilst the stamp duty on and the cost of the warrants issued in respect of the new shares have been deducted from the premium realised. Your directors are happy to say that the European factories have in the past year enjoyed immunity from explosions; but, unfortunataly, an explosion, attended with loss of life, occurred at Deer Park Factory, near Melbourne, by which the operations of the Australian Explosives and Chemical Company were much hampered, although the actual loss was not serious.

KYNOCH'S, LIMITED.

After adding £9 441. to the reserve fund (bringing it up to £69,566.), the accounts of Kynoch, Limited, show a profit for the year ended March 31 of £56,006. The directors recommend a dividend at the rate of 10 per cent. on the ordinary shares and that £14,701. be carried forward.

ACETYLENE EXPLOSION IN PARIS.—An explosion occurred last week at the Wopler Brasserie Avenue, Parmentier, in consequence of the bursting of an acetylene gas apparatus. Three persons were injured and three others bruised. Fire broke out immediately afterwards, but was quickly extinguished. Considerable damage was done.

Official Memoranda.

(From the Board of Trade Journal.)

NEW CUSTOMS TARIFF OF CEYLON.

The following statement shows the import duties now in force on articles imported into Ceylon, together with a list of those articles which may be imported free:—

Articles.		Duty. Rs. c.
Asphalt (12½ c. per cwt.)	per ton	2 50
Castor oil	per cwt.	1 20
Cement	,,	0 17
Cutch	,,	1 70
Kerosine oil	per gallon	0 25
Salt	per cwt.	2 13
Saltpetre	,,	0 50
Soap, other than perfumed and toilet	,,	0 55
Turmeric	,,	0 65
FREE LIST.		
Coal, coke, and patent fuel		Free
Cocoanuts and cocoanut oil		,,
Grindstones		,,
Liquid fuel, the product of petroleum, with a flashing point not under 200° F.		,,
Lime and clay		,,
Manures of all sorts, and ingredients imported solely for the manufacture of manures, and certified as such by the importer		,,
Iron, plates and sheets (not galvanised)		,,
Lead, sheet, pipe and pig		,,
Tin and zinc, in cake or slab		,,
Oil, the produce of creatures living in the sea		,,
Orchella weed		,,
Plumbago		,,
Resin		,,
Saltpetre, refuse of, for purposes of manure only, as certified by the importer		,,
Solder		,,
Soldering fluid		,,
Tallow and grease		,,
Woods, dye, sandal, and of sorts		,,

PROHIBITIONS AND RESTRICTIONS INWARDS.

Dangerous substances, viz., earth oil or mineral naphthas, fulminating powder, gun-cotton, nitro-glycerine, except by licence of the Governor and under regulations to be made by the Governor, with the advice of the Executive Council, from time to time, for the safe landing and deposit thereof.

JAPAN.

The following, among other amendments, of the General Japanese Tariff Law will come into force on August 15th next:—

Articles.		Duty. Per cent.
Alcohol	*ad valorem*	250
Phosphorites	,, ,,	Free
Paraffin Wax	,, ,,	Free
Chlorate of potash	,, ,,	Free
Amorphous phosphorus	,, ,,	Free
Yellow phosphorus	,, ,,	Free
Zinc sheet (No. 2 only)	,, ,,	Free

PETROLEUM AND GOLD IN EAST INDIES.

Enormous capital is being invested in the oil fields of the islands of Sumatra and Java. The "Petroleum Maatschappij Moera Enim," which was organised in 1897 at Amsterdam, with a capital stock of 10,000,000 florins (£833,000) has secured concessions on a large tract of land in the residency of Palembang, Sumatra, and there will be in the near future a great demand for oil well machinery and appliances used in the petroleum industry. Other leading companies engaged in the oil industry are the "Oost Indische Exploratie-Maatschappij" (East Indian Exploration Company) of Amsterdam, which works the deposits in the districts of Singendul, Singenlor and Manggar; the "Japara Petroleum Maatschappij," chartered for fifty years with a capital stock of 500,000 florins, was recently formed in the Hague, and will develop oil fields located in the residency of Japara, Java, north-east of Samarang.

The gold-mining industry has a great future before it. According to the French Consul at Batavia, gold has been known from time immemorial to exist in the Island of Celebes, where the natives have

always made use of the precious metal as a medium of exchange. It is, however, only during the past two years, that any serious attempt has been made to discover the extent and richness of the auriferous deposits. Small private companies were formed, and as a result of the excellent profits secured by the founders, the shares were in such heavy demand that prices rapidly inflated until they now stand at a phenomenal level. Speculation has become so rife that any amount of capital is available for the exploitation of auriferous properties. At present only one company is at work, the "Nederlandsch Indische Mijnboun Maatschappij." It is stated, however, that other mining companies will shortly be at work. There will then be an enormous demand for mining machinery and plant, and the opportunity should not be lost by manufacturers, who would do well to send representatives to Batavia. Some of the gold fields are stated by speculators on the spot to rival those of the Transvaal.

NEW CEMENT FACTORY IN NORWAY.

A report has been received at the Foreign Office from H.M. Consul-General at Christiania, stating that the building activity in Christiania has caused a considerable growth in the demand for cement, the importation of which from Germany is stated to be largely on the increase.

The Norwegian Cement Company at Slemmestad is now said to be about to erect a large new factory in Norway, which is to be a branch of one of the largest cement factories in Germany. It is considered that, when completed, the new factory will be able not only to supply sufficient to meet the demand for cement in Norway, but also to manufacture for the purpose of exportation.

IMPORTS OF EXPLOSIVES INTO PERU.

The United States Consul reports that the total amount of dynamite, powder, &c., imported into Peru from 1st July, 1897, to 30th June, 1898, was:—Dynamite, 4,412 cases, weighing 20,295 kilo. (44,742 lbs.); blasting and mining powder, 52 packages, a total weight of 2,911 kilo. (6,417 lbs.); common black sporting powder, 486 boxes, weighing 2.770 kilo. (6,107 lbs.) in all; triple dynamite fulminants, 1,435,000; shot gun fulminants, 3,240,000; fuse for dynamite fulminants, 164,900 rolls.

All explosives imported into Peru must be deposited in the vaults of the Sociedad San Lorenzo, in the island of San Lorenzo, about seven miles from Callao, and pay 20 cents silver per box. With the exception of sporting powder, imported in small tins, which pays a duty of 50 cents silver a kilo., all explosives are free of duty. Explosives are principally imported from Germany, England, and France, and a little from the United States.

THE AMERICAN STEEL TRUST.—The Steel Trust is now an assured fact. Subscriptions were opened last week. It will be the largest trust in the world, having £125,000,000. capital. It includes the Carnegie Company, and the head promoters are H. C. Frick and W. H. and J. H. Moore.

FATAL EXPLOSION AT STOCKPORT.—The death under distressing circumstances of James Millett, aged twenty-one, labourer, was the subject of a coroner's inquiry at Stockport Infirmary, last week. Deceased was working in the cleaning department at Wright's dye-works, Stockport, when the spirits in use exploded and set fire to the place. Millett was so dazed by the explosion that he could not move, and was dragged out enveloped in flames, his hair being burnt off. The inquiry was adjourned to communicate the details to the Home Office.

THE SUGAR BOUNTIES.—According to the "Pester Lloyd," a deputation of English sugar refiners has been received by the Hungarian Minister of Commerce, M. Hegedues, and urged him to propose the resumption of the Brussels Conference with a view to the the total abolition of the export bounties on sugar. The deputation also suggested that Britain, Austria-Hungary, and Germany should conclude a convention whereby the last two Powers would agree to abolish their bounties, and England on her side would bind herself either to forbid the importation of sugar from bounty-fed countries, particularly France, or to impose a heavy duty on it. The Minister promised to support the suggestion of the deputation.

NON-FLAMMABLE WOOD.– Probably the most novel feature of the Queen's new yacht, which was launched recently, is the employment therein of "non-flammable wood," some 300,000 feet of which, including mahogany, cedar, teak, and pine, have been prepared by the British Non-Flammable Wood Co., Limited, at their works on the Thames, near Wandsworth Bridge, and delivered at Pembroke Dockyard. We understand that these works are to be taken over by the London Non-Flammable Wood Company, Ltd., whose prospectus will appear next week, and that the new company will commence business with large orders in hand, including those for the preparation of the wood for six warships now under construction for the Admiralty in various shipyards.

THE POLISH CHEMICAL INDUSTRIES.

THE past year was a prosperous one for industries in Poland. The recent impulse given to trade and industry by the increased freedom granted by the Government in the development of the country was fully taken advantage of, not only by Poles and Russians, but, especially where capital was required, by Germans, Belgians, and French; Great Britain alone standing aloof. The average return obtained on different enterprises may be taken at 10 to 20 per cent. on trade, 8 to 35 per cent. on industrial undertakings, and 6 to 10 per cent. on mortgages.

Chemical, cement, and brick works, in conjunction with the iron, steel, and textile industries, did well in 1898, and 1899 promises even better results.

Fertilisers.—1898 may be considered the pioneering year for artificial manuring, because, although superphosphates and the different slags were used by the larger and more enlightened farmers, they were far from being generally employed, and it is only now that the small farmers and peasants, who farm the bulk of the land, have taken to using artificial manures. Prices were a trifle higher than in 1897, partly because of the great sudden demand, but more especially on account of the general rise in the price of phosphates on the European markets. At one time during the summer a premium of 100 r. (£10 13s.) over and above the price was paid per 10 tons for German phosphates, and even then they were difficult to obtain.

Chemicals.—With the exception of the artificial manure factories, 1898 cannot be considered a specially favourable year for the chemical industry. The market was not very strong, and the demand being below the production, some works have been obliged to diminish their output.

Sulphuric acid went up in price on account of the syndicate formed in 1897; the prices of other acids remained the same.

The demand for artificial manures, especially superphosphates, was larger than ever in the autumn of 1898, so that prices went up some 30 per cent. at the beginning of this year. Last year the price of Thomas slag was 7 5 c. per 1 per cent. of soluble phosphoric acid. Quotations are now made at 9 c. at present, and a further rise is still expected.

Two new works are being built, each to have an output of 10,000 tons of superphosphate.

Salt.—In consequence of the lowering of the tariff for the carriage of salt by rail, the price of salt went down during 1898. The wholesale price of dry salt containing 97 per cent. of NaCl. is now about £2. per ton delivered at any railway station in Poland.

At the end of 1898 a congress of Russian salt producers was held at St. Petersburg with a view to obtaining further concessions from the Government as to the tariff for the transport of salt. The decision of the Government is not yet known, but it is generally believed that the demands of the congress will be wholly or partly granted, so that a further fall in the price of salt may be expected.

Sulphur.—Notwithstanding the wealth of the sulphur beds at Czarkovsky, in the Government of Kielce, no progress was made in the exploitation of them during 1898, so that there is as yet no question of competition with Sicilian sulphur, upon the imports of which Russia at present depends.

Cement.—The high prices for cement ruling at the end of 1897 were maintained during the year 1898; even at the close of the building season the demand was very considerable, on account of the great demand in Germany, so that at the beginning of 1899 the stock at the works was almost *nil.*

The demand in Germany was caused by a new law which came into force in that country in 1898, by which every German town with a population of over 10,000 must be drained. Thus Germany actually became a market for Russian cement, whereas in former years some 15,000 barrels of cement were imported annually from Germany to Russia.

The German syndicate of cement works on the one side, and the cement works in Russian Poland on the other, have now entered into an agreement by which they mutually bind themselves not to export any cement during 1899. Should this arrangement be found advantageous for both sides it will be further prolonged.

Of the new cement works which are building only one has actually started operations. When the production of all these works is on the market it is probable that a considerable fall of prices will take place, but in that case the use of cement will become more general, as it will be used in much work for which it is now impossible to employ it on account of the expense, but as in that case a greater quantity of cement will be required to satisfy the demand, an augmentation of the existing works will in turn become necessary, so that on the whole the industry may not, perhaps, suffer from the fall in price.

The total production of cement in Poland is about 8,000,000 pouds (2,700,000 cwts.).

THE ELECTRO-DEPOSITION OF PALLADIUM.

BY SHERARD COWPER-COLES.

In the course of a paper read before the Institute of Mining and Metallurgy, the author says, palladium is usually found associated with platinum, and has a rule it does not exceed 1 per cent. It is generally separated from platinum by chemical processes.

At the present time the uses for palladium are very limited, the demand being considerably less than the supply, consequently the price is low as compared with some other rare metals. The present price is about double that of platinum, but its specific gravity is about half. Its colour is almost as white as that of silver, and it takes a beautiful polish. Palladium is very malleable and ductile, and is harder than platinum. The following table gives the hardness of electro-deposited palladium as compared to other metals:—

Nickel electro-deposited	10 0
Sheffield plate	10 0
Antimony electro-deposited.....	9·0
Palladium deposited bright	8·0
Cadmium deposited bright	4·5
Silver electro-deposited and burnished ..	4·0

The figures give the hardness as represented by the number of grams weight on a diamond point required to produce a scratch.

Palladium fuses at a somewhat higher temperature than platinum. Moissan has found that palladium, like platinum, dissolves carbon at the temperature of the electric furnace, but does not unite with it, the whole of the carbon separating out as graphite on cooling.

The author has recently used palladium as a protective coating and reflecting surface for parabolic reflectors, the whole of the parabolic reflector being made by electro-deposition. The palladium can be deposited quite bright on the surface of the mirror, so that it does not need polishing, which would destroy the true parabolic curve. A deposit of 70 to 80 grains per superficial foot is found to afford a good protective coating. Such a film of palladium is probably transparent, in which case a considerable portion of light would be reflected from the silver surface beneath the protective film of palladium.

Palladium is unchanged by air at ordinary temperatures, but at a moderately high temperature a thin film of oxide is formed, which has a bluish colour. At a higher temperature the oxide is decomposed. Palladium alloyed with one-tenth silver is sometimes employed for the graduated scales of astronomical instruments.

Smee devoted some attention to the electro-deposition of palladium, and attempted to deposit metallic palladium from the nitrate, but only succeeded in getting down a black powder. He found ammonio-muriate of palladium dissolved in ammonia to be the best. He also tried iodide of palladium, by adding a solution of iodide of potassium to a solution of palladium, but found it was not a suitable salt for electro-deposition. He also tried palladio-cyanide of potassium. An electrolyte made up of cyanide of potassium is said to take up a considerable quantity of metal and yield the metal freely, so that heavy, reguline deposits can be obtained.

Bertrand has succeeded in obtaining good deposits with a solution formed of the doubled chloride of palladium and ammonium, made perfectly neutral, a palladium anode was found to dissolve freely.

Gore has electrolysed a solution of chloride of palladium, in which a palladium anode was found to dissolve, and a black deposit of palladium was obtained upon the cathode.

The author has found a solution of palladium ammonium chloride to be one of the best, if not the best, for depositing palladium in a bright form. The best proportions are about a 0·62 per cent. solution of palladium ammonium chloride dissolved in about a 1 per cent. solution of ammonium chloride. The solution is worked at a temperature of about 75° F., the current used per sq. ft. being about 0·12 ampere, the E.M.F. at the terminals of the bath being 4 to 5 volts. The anodes can be either palladium foil or carbon.

MINERAL RESOURCES OF THE PHILIPPINES.

AT this distance and with the slight exploratory work which has been carried on in the Philippine Islands, the minerals that can be profitably exported (says a writer in the *Engineering Magazine*) are naturally best known. Mr. George F. Becker, in his recent investigation, has given a very clear view of the present mineral exploration in the Philippines, and has shown that Gold is found in a great number of localities in the archipelago, from northern Luzon to central Mindanao. In most cases the gold is detrital, and is found either in existing watercourses or in deposits now deserted by the current. It is said that in Mindanao some of the gravels are in an elevated position, and adapted to hydraulic mining. There are no data at hand which indicate decisively the value of any of the placers, but the fact that they are washed largely with cocoanut shells for pans by the natives is an indication of either rich deposits or quite coarse gold. In the province of Abra, at the Northern end of Luzon, there are placers, and the River Abra itself yields auriferous gravel. In Lepanto there are gold-quartz veins as well as gravels, and here also is the best-developed sample of copper ores, although these are also reported from a great number of localities on the islands of Luzon, Mindoro, Capul, Masbate, Panay, and Mindanao. This last island is practically unexplored, and full of possibilities. The copper region at the northern end of Luzon is unquestionably valuable. Here copper ore had been smelted by the natives, even before Magellan discovered the Philippines. It is smelted in a remarkably complicated way, considering the antiquity of the work. The process consists in alternate partial roasting and reduction to matte, and eventually to black copper. It is genarally believed that this method was introduced from China or Japan.

The existence of iron-ore in abundance on Luzon, Carabello, Cebú, Pana, and doubtless in other islands, and the fact that a small industry exists in the province of Camarines Norte, on Luzon, where wrought-iron is made into ploughshares at a sort of bloomary, brings up the importance of the fuel question aside for the need for a coaling station. There is coal in various provinces of the island of Luzon and on other islands. The finest beds thus far discovered appear to be those in the small island of Batan, lying to the east of the southern portion of Luzon. These seams vary from two to fourteen feet in thickness, and analyses show the coal equal to at least a good quality of lignite. Besides these, the coalfields of southern Luzon and across in the northern portion of Sāmar, in Mindora, where there are large deposits, and Semirara, Masbate, and Panay, all will justify careful exploration, and especially promising are specimens from the southern portion of Leyte, and of remarkably high quality, although nothing definite is known about the deposit. On the island of Cebú are deposits well worth examination. A considerable quantity of coal has been mined there, and the occurrence of petroleum-springs and the reported presence of natural gas make this a likely field for exploration. Seams fifteen feet thick are reported from Uling, ten miles from the capital of Cebú, and such analyses as have been made indicate a fuel value of about two-thirds of the calorific effect of Cardiff coal, with only about 4 per cent. ash. On the island of Negros, at Calatrava, there are also coals believed to be important, and coal is known to occur at eight different localities on the island of Mindanao. The presence of lignite is indicated from one end of the coast to the other. Evidently the supply of fuel in the Philippines is promising, and, taken together with the iron and other metallic resources, would suggest that American metallurgists, instead of supplying this region from the United States by direct exportation, could more profitably export manufacturing plants. But what is of more interest to the United States, as supplying what may be considered a lack in its own mineral resources, is the possibility of securing supplies of tin ore and of platinum metals from the Philippines; for, while it is probable that the United States may become a large producer of platinum in the near future, there is no question that the usefulness of this material will justify every possible search for it in the Philippines, and, from the geological conditions, with very fair prospect of success. It is quite easy to exaggerate the desirability of new sources of tin for the United States. In fact, the attitude of most mineral writers has been to overrate the desirability of tin mines in the United States The metal has been given a higher place than it really deserves. It is not generally recognised that the supply of tin for America is neither limited to Cornwall nor dependent upon her mines for any considerable portion of what is used. The fact is that the Straits Settlements, together with the islands of Banca and Billiton, yield all that the United States can possibly use, and a desire for tin in the Philippines should be but for the purpose of finding deposits even richer than those in the Straits, and where it would be easier to work them under American conditions.

Re-trial of a Well Boring Case.—In the Court of Appeal last week, judgment was delivered in the case of Ward *v.* Matthews, on the application of the defendant for judgment, or new trial or appeal from verdict and judgment dated March 14th last, before Mr. Justice Lawrance and a common jury at Leeds. In this case the plaintiff, the owner of dyeworks at Halifax, sued the defendant, a well-sinker of Manchester, for damages for negligence. It appeared that the defendant had contracted to bore a 14-inch hole for the purposes of a well 150 ft. deep at the plaintiff's works, and his case was that the work was unskilfully and negligently done by the men employed by defendant; so that the pump could not be made to work after it had been properly fitted and fixed. The plaintiff claimed £308. 13s. 4d. damages, and the jury awarded him £100, for which sum judgment was entered. The defendant appealed on the ground that the damages were excessive, that the verdict was against the weight of evidence, and that there had been misdirection by the judge. Their Lordships disagreed in their judgments, but by a majority of the Court the appeal was allowed and a new trial ordered.

Market Reports.

TAR AND AMMONIA PRODUCTS.

There is practically no change in benzols either as regards price or position. Carbolic acids are steady. Naphthas are dull but without change in values. Pitch keeps steady, while the demand for creosote is firm.

Sulphate of ammonia is very steady and the market is active both for prompt and forward. The Continental demand has been better, and this, coupled with the scarcity of sulphate, has augmented prices, which now close at £12. 12s. 6d. for London outside makes, Hull, £12. 7s. 6d., Leith, £12. 10s. Beckton quotation has been withdrawn.

MISCELLANEOUS CHEMICAL MARKET.

In alkalies a good steady business continues to be done. Prices all round are firm, and there seems little probability of any relapse. For caustic soda, quotations are unchanged, viz., f.o.b. Liverpool, 77%, £7. 12s. 6d.; 74%, £7. 7s. 6d; 70%, £7.; 60%, £6. per ton. Ammonia alkali is in good demand and price firm at £3. 17s. 6d., bags, f.o r. Leblanc soda ash, 1¼d. per degree, f.o.b. Soda crystals, bags, £2. 10s. per ton; bicarbonate, £6. 15s. per ton. In bleaching powder, business is active, and price firm at £4. 17s. 6d. to £5., hardwoods, f.o.b. Liverpool; softwoods, £4. 2s. 6d. f.o.r. makers' works. Chlorates still in excess of requirements, and values are unaltered. Sulphate of copper firm at £26. 10s. to £27. f.o b. Nitrate of soda, 7s. 7½d. to 7s. 9d. per cwt. All ammonia salts are rather dearer. White powdered arsenic in good request, and price is maintained at £18. 15s. to £19. Garston. Brown acetate of lime steady at £4. 17s. 6d. c.i f. Grey, £8. per ton. Acetate of soda somewhat dull at £12. 10s. to £12. 15s. per ton. Acetic acid and other acetates unchanged. Foreign white sugar of lead selling at £24. ex store. Prussiate of potash in strong demand, and firm for prompt delivery at 8d. to 8¼d. per lb. Soda 6¼d. per lb. Tartaric acid 1s. per lb. In aniline oil and salt there is little business passing. For green copperas there is a better inquiry generally, and price is rather firmer. Carbolic acids are only in moderate request, and quotations are unaltered. Makers of superphosphates still continue busy, and prices are well maintained. In miscellaneous chemicals for the textile trades business is quiet owing to the general Whitsuntide holidays.

THE METAL MARKETS

LONDON, WEDNESDAY.—Pig iron: Scotch Warrants closed at 63s. 6d., Middlesbrough, 55s. 6½d., cash, and hematite, 64s. 9d. Copper steady: Chili bars, G.O.B.'s and G.M.B.'s, closed at £77. 17s. 6d. to £78. 2s. 6d. cash; £75. 10s. to £75. 15s. three months. Tin quiet: Straits closed at £117. 5s. to £117. 15s. cash, and £117. 15s. to £118. 5s. three months; Australian, £117. 15s., English ingots, £120. to £120. 10s. Lead steady: Spanish, £14. 3s. 9d.; English, £14. 7s. 6d. Silesian spelter, ordinary, £28. 10s. to £28. 12s. 6d. Nickel, 1s. 2½d. Antimony, £39. 10s. Quicksilver: first hands, £8. 2s. 6d.; second hands, £8. 2s. *Copper Shares* steady: Cape, 4 11/16 to 4 12/16; Copiapo, 3⅜ to 3½; Libiola, 2 to 2⅛. Mason and Barry, 4⅜ to 4⅝; Rio Tinto, 50 6/16 to 50 7/16; Tharsis, 8½ to 9.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

OILS.—Palm oil is very firm and sellers careful. Lagos is reported at £21. 12s. 6d. to £21. 15s. Olive is quoted £31. to £32. per tun, and there is a small business doing thereat. Linseed quiet at 19s. 6d. to 20s. cwt. for Liverpool makes in export casks. Cottonseed steady at 17s. to 17s. 6d. cwt. Castor oil slow of sale, with good seconds Calcutta at 2¾d., first pressure French 2 11/16d. to 2¾d. Tallow is firm, but sales are rather restricted. Resin steady, with common at 4s. to 4s. 3d., medium 4s. 6d. to 5s. 6d., and fine 6s. 6d. to 8s. 6d. cwt. Spirits of turpentine scarce and firm at 38s. Petroleum firm, with American 6d. to 7¼d., and Russian refined 5⅜d. to 5¾d. per gallon.

CAKES.—There is a continued good consumptive demand for American Western linseed, and the market rules firm, with sellers still asking £5. 17s. 6d. to £6 7s 6d, but other imported descriptions are rather quiet, with sellers of River Plate at £6. 15s., of Bombay at £7. to £7. 5s., and of Russian at £7. 5s. per ton. Liverpool makes meet a moderate consumptive inquiry at former currencies, viz., £7. 5s. to £8. per ton, according to brand. Good to choice brands of American decorticated cottonseed are unchanged in value, with a moderate business passing at £5. 12s. 6d. to £6. 2s. 6d., according to quality, and at the close there is rather a firmer tendency in the market; buyers of Liverpool decorticated makes show little inclination for trade, but the quotation is steadily maintained at £6. 2s. 6d. to £6. 15s. per ton, according to brand. Undecorticated Liverpool makes move off quietly into consumption at £4. 15s. to £5. 5s., according to brand; whilst Egyptian on the spot have a firmer market, with buyers of sound at £4. 10s. in quantity and £4. 11s. 3d. per ton for retail parcels ex quay.

COLOURS.—Prices are steady, and practically without change. Ochres: Oxfordshire—common £10., medium £12., best £15.; Derbyshire—common 40s., medium 50s., best 60s.; Welsh—best 91s. seconds 50s., and common 18s.; Devonshire, 40s. to 45s.; French, J C, 65s. Umber: 40s. to 45s. White lead: £16. Red lead unchanged. Venetian red: £6. to £10. Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7., medium, £10.; finest, £20.; Zinc oxide: £22. 10s. to £25.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

The uneven condition of the Scottish mineral oil and paraffin industry is shown in strong relief by the annual financial statements of four of the companies that have already declared. Two of them provide fair dividends for the ordinary shareholder; a third manages to liquidate some arrears of dividends on preference stock, but has nothing for the ordinary shareholder; while the fourth comes out with a positive working deficit, over and above failure to meet interests on loans and debentures. Meanwhile, the products of the industry rank higher in value than for some years past; but on the other hand fuel, labour, and other indispensable manufacturing adjuncts, are dearer. The market in general chemicals has practically no new feature since last week. Sulphate of copper is firm but has not further advanced. Sulphate of ammonia, close after the middle of last week, touched £12. 10s., spot Leith, with forward buyers getting a little anxious about closing for their advance needs.

Chief prices current are:—Soda crystals, £2. 5s. to £2. 7s. 6d. basis nett, Tyne; soda ash, £4. 2s. 6d. to £4. 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 5s. to £4. 15s. nett, Glasgow; caustic soda, white, 74° £7. 7s. 6d., 70/72° £7., 60/62° £6., and cream 60/62° £6., all nett, Liverpool; bleaching powder, 35/37°, £5. 5s. to £5. 10s. nett, Tyne; saltcake, 27/6; borax, English refined, £16., and boracic acid, £26. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s., nett, Liverpool; bichromate of potash, 3½d., less 6% for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d., less 6% for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow); chlorate of potash, 3⅝d, less 5% Liverpool; nitrate of soda, 8s. 3d.; sulphate of ammonia, £12. 10s. prompt, f.o.b. Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £26. 10s., less 5% Liverpool; paraffin scale, hard, 1⅞d. to 2d. per lb., and soft 2d. per lb.; paraffin wax, 120° semi-refined, 2¼d. to 2½d. per lb.; paraffin spirit (naphtha), 9d. to 9½d. per gal.; paraffin oil (burning), No. 1, 6¼d.; and crystal, 6¾d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 15s. to £5. 5s., 885° £5. 10s. to £6., and 890/895° £6. 5s. to £6. 10s. Week's imports of sugar at Greenock were 28,541 bags, beet, unrefined.

TYNE CHEMICAL REPORT.

TUESDAY.

Chemicals are unaltered in price though there is perhaps a slightly better demand. Soda crystals are still quoted at £2. 12 6d. per ton. gross weight, locally. Caustic soda, 76/77% £8. and 70%, £7 per ton. Sulphur steady at £4. 15s per ton.

Bleaching powder, softs, £5. 5s. per ton, nett; do., hards, £5. 10s. per ton, nett; caustic soda: 76/77% £8., and 70% £7. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48% £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75°Tw., £2. 12s. 6d. per ton, nett; do., 100°Tw., £3. per ton, nett; do., 140°Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. od. per ton, nett; blanc fixe, £6. 10s. per ton nett; chloride of barium, refined crystals, £6. 15s. od. per ton, nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt firm at 9s.6d. per ton, f.o.b. Tees.

COALS.—Trade still continues very steady though there has been a slight falling off in the demand during this week. Coke is firm and scarce at 25s. per ton, f.o.b. Gas and household coals are quieter. Best Northumbrian steam, 12s. 6d. to 13s.per ton; second qualities, 11s. 6d. to 12s. per ton; small steam, 7s. 6d. to 8s. per ton; bunker coals, 10s. to 10s. 6d. per ton; gas coals, 10s. to 11s. per ton; household coals, 10s. per ton; coke, 25s. per ton.

New Companies.

Magnet Chemical Co., Ltd.—Capital £1,000. in £1. shares. This company has been formed to carry on the business of oil, tar and grease refiners, distillers and manufacturing chemists.

Globe Soap and Chemical Co., Ltd.—Capital £5,000. in £1. shares. This company has been formed to acquire and carry on the business carried on at the Globe Works, Middleton Junction, and Britannia Mills, Middleton, Lancs., as the Globe Soap and Chemical Co. Registered office, 5, Britannia Mills, Middleton, Lancs.

Horsfall Destructor Co., Ltd.—Capital £100,000. in £1. shares. This company has been formed to acquire the business carried on by the Horsfall Furnace Syndicate, Ltd., to erect and maintain furnaces, machinery, and apparatus for the destruction of town or other refuse, and any plant for the generation of electricity, and to carry on the business of mechanical and electrical engineers, machine makers, boiler makers, etc. The subscribers to the memorandum of association are:—A. Greenwood, M.I.C.E., 16, Gt. George-street, Westminster; G. Watson, A.M.I.C.E., 21, Springfield Mount, Leeds; C. E. A. F. S. Butler, 4, Prince's Mansions, Victoria-street, S W., manager; F. L. Watson, 21, Springfield Mount, Leeds, A.M.I C.E.; W. Hillman, 7, Tolson-street, Leeds, engineer; C. F. Dent, 5, St. John's Terrace, Leeds, cashier; J. Williams, 38, Springfield Place, Leeds, clerk.

Joseph Rank, Ltd.—Capital £700,000. in £10. shares. This company has been formed to acquire and carry on the business of flour miller and corn merchant, carried on by J. Rank at Kingston-on-Hull, and the business of a seed crusher carried on by him as "The Eagle Oil Mills Co." at Kingston-on-Hull. The subscribers to the memorandum of association are:—J. Rank, Pearson's Park, Hull, miller; Mrs. E. Rank, Pearson's Park, Hull; J. S. Kemp, 96, Marlbro' Avenue, Hull, manager; A. J. Laybourn, Eden House, Beech Grove. Hull, seed crusher; W. H. Raylor, 9, Kingston Terrace, Witham, Hull, milling expert; G Headley, 30, Strawberry-street, Hull, miller; R. Pinkney, 18, St. Paul's Avenue, Drypool, Hull, horseman.

New Globe Cement Chalk and Whiting Co., Ltd.—Capital £150,000. in £1. shares (75,000 £5. per cent. cum. pref.) This company has been formed to acquire the business carried on by the Globe Portland Cement and Whiting Co., Ltd., and to manufacture, sell and deal in cements, lime, plaster of Paris, whiting, asphalte, bricks, tiles, pipes, etc. The subscribers to the memorandum of association are:—J. B. Feilding, Upper Downing, Holywell, N. Wales, land agent; B. Bailey, Rodenhurst, Ilford, surveyor; W. J. Kirk, 29, West End-lane, N.W., accountant; H. E. Matthews, 33. Narcissus-road, W., Hampstead, coal factor; S Nevill, 27, Aubert Park, Highbury, N., gentleman; F. T. W. Goldsmith, 1, Verulam Buildings, Gray's Inn, W.C., architect; T. Sapio, 19, Gt Percy-street, W.C., gentleman.

IMPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.

Week ending May 13th.

Acetate of Lime—
U. States, 474 pks. Gillespie Brs & Co.

Acetic Acid—
Holland, 76 pks. A. & M. Zimmermann
" 50 R. W. Greeff & Co

Acetone—
Germany, 2 pks. R. W. Greeff & Co.
" 10 E Catlin
Holland 6 Phillips & Graves
Germany, 10 J. Norrenberg & Co.

Alkali—
France, 112 c. J. Harrison
Italy, 211 Clyde S. Co.

Ammonium Phosphate—
Holland, £330 Brit. Non-Flammable Wood Co.

Antimony Ore—
France, 15 t. H. R. Merton & Co.
Spain, 3 T. Morrison & Co., Ld.

Barium Nitrate—
Holland, £105 Petri Brs.

Barium Sulphate—
Germany, 38 cks. J. L. Lyon & Co.
Belgium, 54 121 pks. "
" 86 O' Hara & Hoar

Barytes—
Germany, 110 pks. W. Harrison & Co.
Holland, 13 J. Barber & Co.
" 88 Taylor Brs.
" 13 Phillips & Graves
Belgium, 68 J. L. Lyon & Co.
" 579 W. Harrison & Co.

Bleaching Powder—
France, 91 pks. J. M. Steel & Co.

Calcium Carbide—
Belgium, £110 Fisher, Renwick & Co.

Caoutchouc—
France, 4 c. S. Baker & Co.
" 1 T. H. Lee
E. Indies, 69 W. M. Smith & Sons
Germany, 25 Prop. Bull Wf.
Colon, 15 Hoare, Wilson & Co.
P. E. Africa, 13 Hale & Son
San Salvador, 1 Major & Field
Spain, 10 Stiebel Brs
Natal, 6 Brockes & Green
" 41 Lewis & Peat
Sydney 6 "
Colon, 60 "
" 60 Prop. Bull Wf.
Zanzibar, 14 L. & I. D. Jt. Co.
Straits, 48 W. Pope & Co.
" 88 E. Boustead & Co.
" 227 L. & I. D. Jt. Co.
Colon, 4 "
F. W. Africa, 2 "
U. States, 8 "
Belgium, 50 T. Ronaldson & Co.
France, 1 Prop. Bull Wf.

Castor Oil—
Italy, 40 cs. Stebbing & Co.
France, 10 cks. C. Tennant, Sons & Co.
" 42 brls. Lucas & Spencer's Wf., Ld.

Caustic Potash—
Germany, 2 pks. J. M. Steel & Co.
" 17 South Devon Wf. Co.

Chemicals (*otherwise undescribed*)
Spain, £5 J. Hall, Junr. & Co.
U. States, 155 S. Lambert
Germany, 16 Butler's Wf., Ld.
" 563 A. & M. Zimmermann
Sweden, 15 A. G. Barker
Belgium, 15 John Cockerill Line
Germany, 415 L. & I. D. Jt. Co.
Holland, 10 Netherlands S S. Co.
" 60 Phillipps & Graves
Belgium, 109 T. Palmer
" 940 T. H. Lee
France, 250 Mory & Co
Germany, 8 H. Lambert
" 20 H. & G. Dutfield
" 10 A. Zumbeck & Co.

Chrome Ore—
Sydney, 289 t. A. B. Curtis & Co.
" 171 Union L. Co., Ld.

Citrate of Lime—
Italy, 22 pks. W. C. Bacon & Co.

Citric Acid—
France, 12 pks. B. & F. Wf. Co., Ld.

Coal Products—
Carbolic Acid
Germany, 50 pks. J G. Back
" 1 Gestewitz
Pitch
France, 28 brls. H. Hunt
Tar
Germany, 52 brls. J. Owen
N. Russia, 99 Linck, Moeller & Co.
" 63 Dussek Brs. & Co.

Cream of Tartar—
France, 7 pks. C. Atkins & Nisbet
" 2 Blackmore, Leconte & Co.
" 5 Vokins & Co., Ld.
" 2 B. & F. Wf. Co., Ld.
" 8 F. C. Devon & Co.
" 30 W. C. Bacon & Co.

Dyestuffs (*otherwise undescribed*)
U. States, 4 pks. L. & I. D. Jt. Co.

Dyestuffs—
Alizarine
Holland, 7 pks. G. S. N. Co.
Aniline
France, 1 pk. E. Flageollet, Parent & Co.
Argols
Italy, 423 pks. B Jacob & Sons
" 89 Thames S. T. & L. Co., Ld.
Cutch
U. States, 773 pks. H. A. Litchfield & Co.
Extracts
Germany, 305 pks. Fuerst Brs.
Holland, 1 Orient Co.
Gambier
Straits, 521 pks. Prop. Hay's Wf.
Japan, 247 L. & I. D. Jt. Co.
Straits, 410 E. Boustead & Co.
" 510 Lewis & Peat
" 470 Brinkmann & Co.
Indigo
E. Indies, 10 chts. Schonlank, Engel & Co.
Belgium, 1 John Cockerill Line
Austria, 1 L. & I. D. Jt. Co.
E. Indies, 20 "
" 25 Parson & Keith
" 76 Park Macfadyen & Co.
" 5 Kaltenbach & Schmitz
" 10 H. J. Perlbach & Co.
" 26 pks. J. W. Cook & Co., Ld.
Germany, 10 srns. L. & I. D. Jt. Co.
Italy, 1 Thomssset & Co.
Colon, 1 Schloss Brs.
Myrabolams
E. Indies, 670 pks. Hepburn
" 1,755 D. Sassoon & Co.
" 1,232 J. Graves
" 2,350 J Greig
" 2,330 L. & I. D. Jt. Co.
" 579 Baxter & Hoare
" 675 Fellows, Morton & Co.
" 1,000 Ralli Brs.
" 1 340 Culverwell, Brooks & Co.
" 2,000 P. & O. Co
" 339 H. J. Perlbach & Co.
Saffron
Spain, 1 pk. Richardson, Spence & Co.
Tanners' Bark
Adelaide, 49 t. Leach & Co.
Natal, 13 A. & W. Nesbitt
" 33 Boutcher, Mortimore & Co.
Auckland, 15 Beresford & Co.
Natal, 31 Flack, Chandler & Co.
Auckland, 4 Brown & Elmslie
Tannin
Germany, £80 R. W. Greeff & Co.
Tumeric
E. Indies, 41 pks. G. & H. Green
" 13 H. A. Litchfield & Co.
" 429 L. & I. D. Jt. Co.
" 142 Major & Field

Farina—
France, 3 pks. Mory & Co.
Germany, 310 J. Barber & Co.
Germany, 50 M. D. Co.

Glucose—
U. States, 2,075 pks. 9,937 c. R. G. Hall & Co.
U. States, 102 600 Fellows, Morton & Co.
" 100 587 L. Norman & Co., Ld.
" 250 1,500 L. & Til. L. C. & D Co.
" 50 300 R. Johnson & Co.
" 50 297 A. E. Piggott
" 200 1,180 Oblenschlager Brs.
" 1,300 1,300 G. Clarke & Son
" 50 300 Page, Son & East
Germany, 50 497 Beresford & Co.
" 200 200 Baxter & Hoare
U. States, 50 280 L. & I. D. Jt. Co.
France, 200 200 W. E. Cole
" 200 202 L. Norman & Co., Ld.

Glue—
Germany, £140 J. Greig
U. States, 30 Ldn. Parcels Del. Co.
Germany, 150 J. Barber & Co.
U. States, 80 Parsons, Fletcher & Co.
" 30 Armour & Co.
" 108 Anglo-Amer. Oil Co.
Norway, 320 C. G. & H. Nicholl
France, 90 W. Harrison & Co.
" 90 Burnett Brs. & Sons
Germany, 250 Butler's Wf., Ld.
" 293 L. & I. D. Jt. Co.
" 96 L. & N. W Ry. Co.
France, 900 T. M. Duche & Sons
" 49 Mory & Co.
Austria, 320 J. Greig
Germany, 66 Otto Schmidt & Co.
Italy, 16 Threw & Stiebel
Holland, 61 Phillipps & Graves
Belgium, 11 Leach & Co.
France, 76 J. Harrison
Belgium, 955 G. E. Banes

Glycerine—
Germany, £37 D. T. Domeier & Co.
Holland, 400 J. Barber & Co.
France, 310 H. Hill & Sons
Germany, 12 T. H. Lee

Gutta Percha—
Straits, 11 t. 13 c. Gilman Brs. & Co.
" 12 Kaltenbach & Schmitz
" 5 5 Prop Bull Wf.
" 6 18 Huttenbach & Co.
" 30 H. W. Jewsbury & Co.

Manganese Ore—
Germany, 12 t. C. Hof & Co.

Manure—
E. Indies, 305 t. Walker, Howard, & Co.

Holland, 50 Hollinghurst & Co.
G.W.Africa, 606 A. Hunter & Co.

Methyl Alcohol—
France, 1,130 g. Lister & Biggs
" 1,073 E. J. Catlin
Germany, 520 T. Jones & Co.
Belgium, 130 "

Molasses—
U. States, 100 cks. 570 c. Props. Cooperage Wf.
" 700 4,200 Deering & Robottom
" 1,500 9,521 J. R. Francis & Co.

Ochre—
France, 32 pks. J. W Cook & Co., Ld.
" 10 W. E. Cole
Holland, 47 Phillipps & Graves

Oxalic Acid—
Norway, 20 pks. S. C. D. Co.

Paraffin Wax—
U. States, 770 cs. Anglo-American Oil Co.

Phosphates—
Bona, 1,960 t. Pickford & Winkfield
W. Indies, 426 G. M. Bauer
Belgium, 210 C. de Pass & Co.
" 45 J. E. Kitton
Holland, 230 Lawes Chemical Manure Co.

Potassium Carbonate—
Germany, 5 t. H. Lambert
" 20 cks. J. M. Steel & Co.

Potassium Muriate—
Germany, 100 pks. F. W. Berk & Co., Ld.

Potassium Sulphate—
Germany, £200 Perkins & Homer

Pyridine—
France, £96 J. Owen

Pyrites—
Spain, 2,000 t. C. Tennant, Sons, & Co.

Red Lead—
Holland, 50 pks. D. Storer & Sons
" 41 Randall Brs.

Saltpetre—
E. Indies, 1,153 bgs. Lucas & Spencer's Wf.
" 1,319 A. B. Curtis & Co.
Germany, 84 cks P. Hecker & Co.
" 20 Petri Brs.
" 100 bgs. S. E. Railway Co.
Holland, 10 cks. P. Hecker & Co.

Soda Alkali—
Holland, 10 t. Typke & King

Soda Ash—
Holland, 140 t. R. Waters

Sodium Bicarbonate—
Belgium, 2 t. 18 c. J. Forsey

Sodium Hypochlorite—
Germany, 150 pks. H. Lambert

Sodium Prussiate—
Belgium, 12 pks. J. Owen
Germany, 25 "

Sodium Sulphate—
Belgium, 28 pks. Deering & Robottom

Starch—
U. States, 2,000 pks. Union Ltge. Co., Ld.
" 325 R. G. Hall & Co.
" 200 C. Tennant, Sons, & Co.
Belgium, 50 "
" 26 Leach & Co.
" 545 T. H. Lee
" 280 Becker & Wagner
" 340 A. B. Curtis & Co.
Holland, 90 Robinson, Roberts & Co.
" 100 D. R. Wallis
" 65 Hernu, Peron, & Co.
" 1,621 Little & Johnston
France, 200 J. Barber & Co.
" 200 W. E. Cole
Germany, 290 Seaward Brs., Ld.

Stearine—
Belgium, 335 bgs H. Hill & Sons
France, 100 "
Holland, 27 "
" 51 bls. J. Owen

Sulphur—
Italy, 30 t. G. Boor & Co.
" 2 J. T. Rennie, Son, & Co.
" 28 Curtiss & Harvey,
" 10 F. Smith

Tallow—
Straits, 2,543 tins Kaltenbach & Schmitz
Melbourne, 53 cks. L & I. D. Jt. Co.
Germany, 5 J. Barber & Co
U. States, 300 trcs. C. S. Lovell
France, 11 cks. "
N. Zealand, 399 Col. Con. & Dis. Co.
" 303 N. Z. L. & M. A. Co.
Italy, 1 brl. J. Knill & Co.

Tartaric Acid—
France, 2 pks. F. C. Devon & Co.

Ultramarine—
Germany, 20 pks. Steinhoff, Sons, & Co.
Holland, 41 Thames S. T. & L. Co., Ld.
Belgium, 1 Phillipps & Graves
" 36 W. Harrison & Co.

Varnish—
U. States, 24 pks. Taylor Brs.
Germany, 7 Butler's Wf., Ld.

Waste Salt—
Germany, 50 t. Perkins & Homer

White Lead—
Belgium, 87 pks T. & W. Farmiloe, Ld.
" 10 G. E. Banes
" 50 Sawyer, Sons & Co.
" 16 J. W. Cook & Co., Ld.
Holland, 20 Perkins & Homer
" 41 Randall Brs.
" 21 W. A. Rose & Co.
" 20 A. & M. Zimmermann
" 29 Burrell & Co.
" 20 Kerestiji & Co.
" 31 Pilchers, Ld.
Germany, 60 Wilkinson, Heywood & Co.
" 20 Perkins & Homer

Wolfram Ore—
Australia, 10 c. L. & I. D. Jt. Co.

Wood Pulp—
Norway, 250 pks. Johnsen & Jorgensen
" 4,200 London Paper Mills Co.
Sweden, 250 H. Raby & Mather
" 320 W. G. Taylor & Co., Ld.
Germany, 400 "
" 114 Henderson, Craig, & Co.
Belgium, 1,960 J. Harrison

Zinc Oxide—
Germany, 50 pks. Prprs. Dowgate Dk.
" 500 Soundy & Sons
" 120 M. Ashby, Ld.

Zinc White—
Germany, 40 pks. Spies Brs & Co.

LIVERPOOL.

Week ending May 11th.

Acetate of Lime—
New York, 2,347 bgs.

Barytes—
Hamburg, 200 bgs.
Antwerp, 100 66 cks. 34 brls.
Rotterdam, 40 23

Bones—
Alexandria, 205 bgs.

Boracic Acid—
Leghorn, 35 cks.

Castor Oil—
Calcutta, 740 cs. Ralli Bros.
" 590
Genoa, 5 Calvert Brs.
" 40 Evans, Sons & Co.
Leghorn, 30 10 cks.

Citric Acid—
Bordeaux, 4 cks.

Colours—
Hamburg, 2 cks.
Rotterdam, 5 1 cs. 3 brls.

Copper Sulphate—
Hamburg, 21 cks.

Cottonseed Oil—
Pensacola, 1 493 brls.
Baltimore 203

Cream of Tartar—
Bordeaux, 74 cks.
Barcelona, 5 brls.

Dyestuffs—
Argols
Leghorn, 1 cs.
Extracts
Fiume, 300 brls. Oak Extract Co., Ld.
" 250 D. Clermont & Donner
Nantes, 202 cks. J. R. Francis & Co.
Bordeaux, 385 "
Harve, 11 4 cs. Cunard S. S. Co.
Rouen, 90
St Nazaire, 300
Bordeaux, 235
Fiume, 680 cs.
Saffron
Valencia, 2 cs.
Tannin
Hamburg, 40 bgs.
Turmeric
Calcutta, 8 bgs.
Valonia
Patras, 1,586 bgs.
Verdigris
Bordeaux, 4 cks
Farina—
Fiume, 470 bgs.
Stettin, 50
Ferro Chrome—
Bordeaux, 15 cks.
Glucose—
Baltimore, 300 brls.
Boston, 50
Newport News, 350
Rotterdam, 10 cks
Glue—
Fiume, 50 bgs.
Rouen, 15 1 ck.
Rotterdam, 146
Philadelphia, 22
Glycerine—
Rouen, 10 cks. J. R. Francis & Co.
Gutta Percha—
W. C. Africa, 108 bgs. Royal Niger Co.
Lithopone—
Hamburg, 32 cks.
Magnesite—
Hamburg. 100 bgs.
Manganese—
Hamburg, 5 cks.
Manganese Ore—
Bordeaux, qty.
Ergastiria 1,081 t.
Ochre—
Alicante, 100 sks.
Rouen, 50 cks.
Paint—
New York, 7 brls.
" 2 pails J. Bishop & Co.
Boston. 14 cs.
Paraffin Wax—
Philadelphia, 400 brls. Anglo-Am. Oil Co.
" 20 cs.
" 200 brls.
Phosphates—
Punta Gooda, 3,608 t.
Potash—
Hamburg, 62 cks.
Rouen, 78
Dunkirk, 60 dms.
Pyrites—
Huelva, 1,410 t. Mathieson & Co.
Red Lead—
Rotterdam, 49 cks.
Rosin—
New York, 280 brls.
Brnswck., Ga. 3,265
Baltimore, 900
Saltpetre—
Hamburg, 16 cks 180 kgs.
Calcutta, 161 bgs.
Soap—
New York, 1,000 bxs. 832 brls. 8 cs.
Leghorn, 50
Genoa, 333 bgs. 100
Naples. 37
W. C. Africa, 2
N. Orleans, 1,000
Boston, 5 cs. Evans, Sons & Co.
Philadelphia, 3,000 bxs.
Bari, 572 cs.
Sodium Bichromate—
Hamburg, 25 cks.
Sodium Prussiate—
Antwerp, 16 cks.
Starch—
Bremen, 10 bgs. 7 cs.
Baltimore, 400 F. Simmonds & Son
Newport News, 125 brls. J. Howard & Co.
" 500 bgs
Antwerp, 400 cs
Hamburg, 14 cks.
Rotterdam, 76 cs. Brown, Geveke & Co.
Philadelphia, 400 bgs. F. W. Simmonds & Sons
Stearine—
Antwerp, 38 bgs. J. T. Fletcher & Co.
Sulphur—
Catania, 150 t. 195 bgs. 161 brls.
Tallow—
Baltimore, 65 tcs.
New York, 430 400 hds.
Tartaric Acid—
Messina, 8 cks.
Bordeaux, 6
Rotterdam, 5
Ultramarine—
Bremen, 2 cks.
Rotterdam, 16
Waste Salt—
Hamburg, 2336 bgs.
White Lead—
Rotterdam, 2 cks.
Wood Pulp—
Hamburg, 205 bls.
Portland, M., 592
Boston 380 pks. H. B. Wood
Zinc Oxide—
Antwerp, 20 brls.
Rotterdam, 50
Zinc White—
Rotterdam, 86 cks.
Hamburg, 16

MANCHESTER.

Week ending May 13th.

Acetate of Lime—
Gothenburg, 1 ck.
Alcohol—
Hamburg, 3 dms.
Alum—
Rotterdam, 1 ck.
Ammonia—
Rotterdam, 1 ck.
Antimony—
Hamburg, 2 cs.
Barium Chloride—
Rotterdam, 8 cks.
Barytes—
Antwerp, 1 bg.
Rotterdam, 2 cks.
Beta Naphthol—
Rotterdam, 2 cks.
Calcium Carbide—
Gothenburg, 5 dms.
Castor Oil—
Antwerp, 42 cks. 14 bls.
Caustic Potash—
Treport, 40 dms.
Caustic Soda—
Hamburg, 2 cs.
Chemicals *(otherwise undescribed)*
Rotterdam, 1 ck.
Coal Products—
Alizarine
Rotterdam, 112 cks. 1 cs.
Aniline Salt
Rotterdam, 19 cks.
Pitch
Hamburg, 50 cks.
Colours—
Antwerp, 10 cs.
Hamburg { 18 1 pk. / 17 cks. 60 dms.
Rotterdam, { 91 47 brls. / 32 cs. 20 bxs.
Dyestuffs—
Indigo
Rotterdam, 11 chts.
Shumac
Palermo, 100 bgs. 40 bls.
Farina—
Hamburg, 300 bgs.
Stettin, 550 Browne, Geveke & Co.
" 300
" 50 W. H. Stott & Co.
Glucose—
Stettin, { 1,200 bgs. / 50 cks. / 100 kgs.
Glue—
Antwerp, 72 bls.
Hamburg, 20 bgs.
Rotterdam, 220
Treport, 40

Glue Stock—
Hamburg, 96 bgs.
Lead Acetate—
Hamburg, 1 ck.
Stettin, 28
Lithopone—
Rotterdam, 30 cks.
Ochre—
Treport, 17 cks.
Potash—
Hamburg, 26 cks.
Rotterdam, 5
Potassium Bicarbonate—
Hamburg, 20 cks.
Potassium Prussiate—
Antwerp, 15 cks.
Red Lead—
Rotterdam, 7 cks.
Soap—
Rotterdam, 2 cs.
Sodium Chlorate—
Gothenburg, 20 cks.
Sodium Silicate—
Rotterdam, 2 cks.
Starch—
Antwerp, 160 cs.
Hamburg, 50 cks.
Rotterdam, 160 cs.
Stearine—
Rotterdam, 64 bls.
Sulphur—
Rotterdam, 2 dms.
Tartaric Acid—
Rotterdam, 10 kgs.
Ultramarine—
Hamburg, 39 cks.
Rotterdam, 4
Waste Salt—
Hamburg, qty.
Wood Pulp—
Gothenburg, 1,140 bls.
Hamburg, 232 pks.
Rotterdam, 9
Stettin, 1,260 bdls.
Zinc Oxide—
Antwerp, 10 cks.
Zinc Sulphate—
Gothenburg, 15 cks., 20 bgs.
Rotterdam, 2 cks.
Zinc White—
Hamburg, 44 cks.
Rotterdam, 20

HULL.

Week ending May 13th.

Acids—
Hamburg, 1 cs.
Aluminium Sulphate—
Ghent, 150 bgs. Wilson, Sons, & Co., Ld.
Barytes—
Amsterdam, 61 cks. Hull & Netherlands S. S. Co.
Bremen, 141
Rotterdam, 12 "
Chemicals *(otherwise undescribed)*
Amsterdam, 1 cs. Hull & Netherlands S. S. Co.
Bremen, 2 J. Pyefinch & Co.
Chromium Fluoride—
Rotterdam, 10 cs. Hull & Netherlands S. S. Co.
Coal Products—
Alizarine
Rotterdam, 37 pks. 28 brls. Hull & Netherlands S. S. Co.
Aniline
Rotterdam, 81 pks. Hull & Netherlands S. S. Co.
Aniline Oil
Rotterdam, 4 cks. Hull & Netherlands S. S. Co.
Beta Naphthol
Rotterdam, 3 bls. Hull & Netherlands S. S. Co.
Creosote Salt
Rotterdam, 10 cks. Hull & Netherlands S. S. Co.
Tar
Libau, 1 brl.
Colours—
Amsterdam, 2 cks. Hull & Netherlands S. S. Co.
Antwerp, 18 pks. Wilson, Sons, & Co., Ld.
Hamburg, 1 ck.
Rotterdam, 4, 11 brls. 66 pks. Hull & Netherlands S. S. Co.
Dyestuffs—
Extracts
Boston, 203 brls. Wilson, Sons, & Co., Ld.
Rouen, 40 cks. "
" 60
Rotterdam, 1 brl. Hull & Netherlands S. S. Co.
Farina—
Ghent, 10 bgs. Wilson, Sons, & Co., Ld.
Harlingen, 400 Hull & Netherlands S. S. Co.
Stettin, 200 Wilson, Sons, & Co., Ld.
Glucose—
New York, 600 brls.
Rotterdam, 60 bgs. Hull & Netherlands S. S. Co.
Stettin, 100 bgs. Wilson, Sons, & Co., Ld.
Glue—
Christiania, 200 bgs. Wilson, Sons, & Co., Ld.
Hamburg, 110 "
Rouen, 33 "
Rotterdam, 15 Hull & Netherlands S. S. Co.
Glue Stock—
Dunkirk, 6 bls. Wilson, Sons, & Co., Ld.
Lithopone—
Amsterdam, 20 cks. Hull & Netherlands S. S. Co.
Bremen, 40
Stettin, 1 Wilson, Sons, & Co., Ld.
Ochre—
Rouen, 33 cks. Wilson, Sons, & Co., Ld.
" 5
Paint—
Hamburg, 1 brl. Bailey & Leetham, Ld.
" 20 dms. Wilson, Sons, & Co., Ld.
Stockholm, 10 cks. J. Good & Sons
Painters' Colours—
Antwerp, 140 brls. Wilson, Sons, & Co., Ld.
Phosphates—
Antwerp, 2,000 bgs.
Dunkirk, 74 t.
Ghent, 360 Wilson, Sons, & Co., Ld.
Pensacola, 1,237
Potash—
Antwerp, 50 cks. Wilson, Sons, & Co., Ld.
Dunkirk, 24 "
Pyrites—
Huelva, 805 t.
Red Lead—
Amsterdam, 7 cks. Hull & Netherlands S. S. Co.
Saltpetre—
Hamburg, 50 cks. Wilson, Sons, & Co., Ld.
Soap—
Boston, 8 cs.
Soda—
Antwerp, 250 bgs. Wilson, Sons, & Co., Ld.
Ghent, 350 "
Hamburg, 6 cks. Bailey & Leetham, Ld.
Rotterdam, 80 brls. Hull & Netherlands S. S. Co.
Sodium Sulphate—
Rotterdam, 15 dms. Hull & Netherlands S. S. Co.
Starch—
Amsterdam, 50 bgs. Hull & Netherlands S. S. Co.
Antwerp, 100 bgs. Wilson, Sons, & Co., Ld.
Bremen, 843 cs. Veltmann & Co.
Ghent, 198 Wilson, Sons, & Co., Ld.
Stearine—
New York, 300 tcs.
Tallow—
Boston, 355 cks. Wilson, Sons, & Co., Ld.
Dunkirk, 148 "
Harlingen, 1 Hull & Netherlands S. S. Co.
New York, 100 tcs. Wilson, Sons, & Co., Ld.
Tartaric Acid—
Rotterdam, 20 cks. Hull & Netherlands S. S. Co.
Turpentine—
Riga, 52 cks.
Ultramarine—
Rotterdam, 6 cks. Hull & Netherlands S. S. Co.
Varnish—
Antwerp, 3 cs. 3 brls.
White Lead
Amsterdam, 21 cks. Hull & Netherlands S. S. Co.
Antwerp, 38 Bailey & Leetham, Ld.
Rotterdam, 46 Hull & Netherlands S. S. Co.
Wood Pulp—
Christiania, 2,868 bls. Wilson, Sons & Co., Ld.
Gothenburg, 189
Helsingfors, 161 J. Good & Sons
" 164
Zinc Oxide—
New York, 100 brls.
Zinc White—
Amsterdam, 15 cks. Hull & Netherlands S. S. Co.

GLASGOW.

Week ending May 18th.

Ammonium Acetate—
Rotterdam, 2 brls. J. Rankine & Son
Barium Sulphate—
Antwerp, 200 bgs.
Beta-Naphthol—
Rotterdam, 5 cks. J. Rankine & Son
Chemicals *(otherwise undescribed)*
Amsterdam, 2 cs. J. Rankine & Son
Hamburg, 24 cks. J. Currie & Co.
Coal Products—
Aniline
Rotterdam, 54 cks. 10 cs. J. Rankine & Son
Colours—
Rotterdam, 44 cks. 18 cs. 55 pks. J. Rankine & Son
Hamburg, 5 cks. 1 J. Currie & Co.
Dyestuffs—
Extract
Rouen, 9 cks.
Indigo
Rotterdam, 5 cks. J. Rankine & Son
Dyewood Extract—
Antwerp, 3 cks.
Glucose—
Baltimore, 100 brls.
New York, 300
Glue—
Boston, 12 kgs.
Rotterdam, 40 bgs. J. Rankine & Son
Rouen, 14 cs.
Antwerp, 3 cks.
Gutta Percha—
Rouen, 1 cs.
Lead Acetate—
Hamburg, 20 cks. J. Currie & Co.
Magnesite—
Hamburg, 38 cks. J. Currie & Co.
Manure—
Calcutta, 1,120 bgs.
Ochre—
Rouen, 99 cks.
Painters' Colours—
Antwerp, 11 cks.
Potash—
Rotterdam, 30 cks. J. Rankine & Son
Hamburg, 41 dms. J. Currie & Co.
Saltpetre—
Calcutta, 2,032 bgs.
Hamburg, 12 cks., 70 kgs. J. Currie & Co.
Soap—
Philadelphia, 1,998 bxs.
Rouen, 4 cs.
Rotterdam, 90 J. Rankine & Son
Soda—
Rouen, 5 cks.
Starch—
Baltimore, 200 bgs. 350 bxs. 70 brls.
Rotterdam, 200 cs. J. Rankine & Son
Antwerp, 10 bgs. 120 cs.
Tartar—
Hamburg, 11 cks. J. Currie & Co.
Waste Salt—
Hamburg, 50 bgs. 100 t.
White Lead—
Rotterdam, 49 pks. J. Rankine & Son
Wood Pulp—
Drontheim, 390 bls. J. T. Salvesen & Co.
Christiania, 2,160 "
Zinc Oxide—
Hamburg, 50 cks. J. Currie & Co.
Zinc White—
Rotterdam, 15 cks. J. Rankine & Son

TYNE.

Week ending May 13th.

Arsenic—
Hamburg, 20 cks. Tyne S. S. Co.
Barytes—
Rotterdam, 57 cks. 451 bgs. Tyne S. S. Co.
Chemicals *(otherwise undescribed)*
Amsterdam, 3 cs. W. Swanston & Co.
Colours—
Hamburg, 1 ck. Tyne S. S. Co.
Farina—
Hamburg, 40 bgs. Tyne S. S. Co.
Paint—
Antwerp, 1 dm. Tyne S. S. Co.
Hamburg, 20 tins "
Pyrites—
Seville, 685 t. J. Cameron, Swan & Co.
Saltpetre—
Hamburg, 6 cks. Tyne S. S. Co.
Soap—
Rotterdam, 7 cs. Tyne S. S. Co.
Starch—
Antwerp, 121 cs. Tyne S. S. Co.
Rotterdam, 38 "
Zinc Oxide—
Antwerp, 10 brls. Tyne S. S. Co.

GOOLE.

Week ending May 10th.

Ammonium Oxalate—
Rotterdam, 8 cks.
Antimony—
Boulogne, 8 cks.
Barytes—
Antwerp, 37 cks. 50 bgs.
Rotterdam, 60
Caoutchouc—
Boulogne, 15 cks.
Caustic Potash—
Rotterdam,
Colours—
Amsterdam, 4 cks.
Antwerp, 1
Boulogne, 6 6 cs.
Hamburg, 24 7
Rotterdam, 510 77 2 pks.
Dyestuffs—
Extracts
Hamburg, 110 bgs.
Logwood
Belize, 476 t.
Farina—
Hamburg, 100 bgs.
Glucose—
Calais, 100 bgs.
Hamburg, 8 cks.
Glue—
Antwerp, 6 cks.
Boulogne, 8 bs.
Ochre—
Dunkirk, 75 cks.
Phosphates—
Dunkirk, 80 t.
Potash—
Calais, 20 dms.
Dunkirk, 4 cks. 76

Hamburg, 20
Pyrites—
Huelva, 1,868 t.
Saltpetre—
Rotterdam, 200 bgs.
Starch—
Ghent, 464 bxs
Waste Salt—
Hamburg, 383 bgs.

Wood Pulp—
Rotterdam, 54 bs.

GRIMSBY.

Week ending May 13th.

Acids—
Antwerp, 1 cs.
Barytes—
Rotterdam, 100 bgs.
Caoutchouc—
Antwerp, 6 cs.
Hamburg, 2
Rotterdam, 1 truss
Chemicals *(otherwise un escribed)*
Hamburg, 23 cks 5 cs.
Rotterdam, 4
Colours—
Antwerp, { 3 kgs. / 6 cks. 10 cs. 88 pks.
Hamburg, 7 4 167
Rotterdam, 2
Dyestuffs *(otherwise undes.)—*
Dieppe, 16 cks.
Salt—
Hamburg, 500 bgs.
Starch—
Antwerp, 112 cs.
Wood Pulp—
Helsingborg, 880 bs.

EXPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending May 17th.

Acids—
St. Helena, 5 cs. £17
Durban, 10 20
Ammonia—
Cadiz, 1 cs. £12
E. London, 10 14
Bombay, 7 17
Ammonia (Anhydrous)—
Dusseldorf, 31 cyldrs. £70
Sydney, 232 684
Ammonium Carbonate—
Rouen, 5 t. £130
Rotterdam, 34 cks. 28 pks. 137
Ammonium Sulphate—
Samarang, 62 t. 742
Demerara, 50 600
Barcelona, 15 180
Valencia, 85 1,020
Dunkirk, 1 28
Barbadoes, 296 2,580
Hamburg, 45 10 c. 570
Bremen, 20 250
Arsenic—
Singapore, 10 c. £1
Rockhampton, 1 t 21
Sydney, 20 dms. 21
Bone Ash—
Sydney, 1 t. 12 c. £40
Adelaide, 13 13
Fremantle, 2 48
Durban, 1 23
Carbonic Acid Gas—
Channel Is., 46 tubes £17
Havre, 50 flasks 230
Caustic Soda—
Brisbane, 10 c. 67
Philadelphia, 83 t. 14 500
Durban, 4 cs. 13
Chemicals *(otherwise undescribed)*
Lisbon, 4 cs. £54
Philadelphia, 16 cks. 280
E. London, 30 43
Madras, 20 kgs. 26
Perth, 37 pks. 47
Adelaide, 4 82 120
Pt. Chalmers, 1 25
Karachi, 10 26
Durban, 3 33 198
Jamaica, 75 bgs. 83
Hamburg, 1 7 96
Bombay, 22 120
Cadiz, 10 cks. 16
St. Petersburg, 36 1,112
Paris, 6 20 brls. 99
Antwerp, 15 75
Boulogne, 2 7 44
Amsterdam, 19 kgs. 23 174
Brussels, 20 3 167
Melbourne, 13 cs. 42 289
Sydney, 15 46 266
Chloride of Lime—
Gibraltar, 3 c. £5
Citric Acid—
Karachi, 1 c. £8
Sydney, 3 kgs. 21
Bombay, 1 8
Toronto, 11 63
Lisbon, 5 cks. 34
M. Video, 1 cs. 34
St. Petersburg, 1 t. 156
Lyttelton, 2 6
Coal Products—
Alizarine
Dunedin, 8 pks. £123
Aniline
Ghent, 1 ck. £12
Melbourne, 1 cs. 21
Aniline Oil
Genoa, 5 cks. £160
New York, 24 dms. 700
Aniline Salt
Genoa, 15 cks. £80
Messina, 5 30
Anthracene
Cologne, 256 cks. £1,250
Benzol
Stockholm, 4 dms. £50
Hamburg, 48 cks. 91
Carbolic Acid
Jamaica, 4 cs. £12
Montreal, 6 cks. 33
Karachi, 1 7
Paris, 10 22
Cape Town, 13 31
Adelaide, 6 17
Philadelphia, 3 34
Montreal, 6 34
Bombay, 10 brls. 50 13
Ludwigschafen, 124 582
Sydney, 3 64 34
New York, 6 cs. 53
Coal Tar Dyes
Boulogne, 4 cks. 1 cs. £44
Creosote
Paris, 25 cks. £41
New York, 750 675
Newport, N., 250 1 cs. 210
Seville, 4,674 brls. 3,032
Creosote Oil
Brest, 778 brls. £507
Naphthaline
Stettin, 13 cks. £46
New York, 237 352
Libau, 2 17
Pasages, 35 50 bgs. 29
Philadelphia, 2,489 727
Shanghai, 2 30 22
Hamburg, 100 49
Pitch
Boston, 500 cks. £120
Philadelphia, 350 brls. 89
Helsingfors, 229 t. 284
Cadiz, 143 100
Leghorn, 1,560 2,190
Malta, 100 29
Melbourne, 5 5
Newport News, 200 bgs. 27
Dunkirk, 976 t. 1,220
Amsterdam, 720 756
Sydney, 10½ 9
Haiphong, 560 cks. 275
Boston 700 310
Alexandria, 100 310 130
Pitch Oil
Hamburg, 12 cks. £65
Tar
Bombay, 325 rnlts. £278
Durban, 260 dms. 51
Hamburg, 200 brls. 91
Helsingfors, 1,000 cks. 574
Tar Oil
Paris, 15 cks. £17
Copenhagen, 4 brls. 12
Sydney, 80 dms. 20
Copper Sulphate—
B. Ayres, 1 t. £28
Genoa, 105 2,719
Oporto, 5 5 c. 120
Leghorn, 72 10 1,871
Marseilles 50 1,280
Treport, 20 509
Naples, 22 10 582
Bordeaux, 36 1 910
Paris, 25 3 637
Cream of Tartar—
Lyttleton, 4 c. £18
Pt. Elizabeth, 4 16
Dunedin, 15 64
Melbourne, 1 t. 73
Rockhampton, 2 164
Disinfectants—
Seville, 3 cs. £11
Mauritius, 6 pks. 13
Antwerp, 26 76
Calcutta, 7 cks. 500 dms. 43
Aden, 35 15
Adelaide, 6 16
Antigua, 8 16
Hong Kong, 20 brls. 37
Chinde, 54 pks. 27
Montreal, 65 37
Pt. Elizabeth, 140 54
Sydney, { 15 / 72 / 30 dms 252
Manure—
Hamburg, 10 t. £40
Madeira, 50 300
Guernsey, 4 1 c. 10
E. London, 50 385
Malaga, 21 17 160
Barbadoes, 11 110
Colombo, 40 260
Jersey, 10 70
Dunedin, 15 20
Martinique, 16 4 135
Los Angeles, 150 340
Pearl Ash—
Adelaide, 6 c. £5
Phosphorus—
Wellington, 3 cs. £15
Potassium Bicarbonate—
Philadelphia, 2 t. 6 c. £60
Potassium Bichromate—
Dunedin, 1 t. 6 c. £48
Potassium Chlorate—
Colombo, 3 c. £8
Wellington, 1 t. 8 45
Potassium Cyanide—
Pt. Elizabeth, 3 t. 10 c. £345
Melbourne, 17 0 1,589
La Paz, 100 cs. 560
Shanghai, 2 c. 10
Dunedin, 2 11
Carthagena, 2 cs. 24
Townsville, 15 1,850
Delagoa Bay, 25 2,350
Sydney, 4 4 c. 475
Fremantle, 5 9 556
Salammoniac—
Tongku 2 t. £74
Salt Cake—
Brussels, 140 t. £250
Antwerp 133 233
Salts of Lime—
Brussels, 2 c. £22
Salts of Soda—
Brussels, 2 c. £17
Saltpetre—
Invercargill 12 c. £1 2
Dunedin, 10 1 0
Oporto, 9 t. 2 178
Newport, N., 27 10 516
Sheep Dip—
Falkland Is., 6 c. £18
Pt. Elizabeth, 500 cs. 625
Cape Town, 1 t. 3 c. 20
Lyttleton, 8 cks. 23
Calcutta, 100 dms. 7
B. Ayres, 1 t. 18 c. 128
M. Video, 5 12 125
Durban, 10 47
Soda—
Melbourne, 16 c. £27
Sodium Bicarbonate—
Pt. Elizabeth, 10 c. £7
Acajutla, 10 8
Mombasa, 5 t. 31
Singapore, 3 6
Sodium Hyposulphite—
Calcutta, 1 t. £10
Dunedin, 2 5 c. 18
Sodium Sulphate—
Ghent, 40 t. £60
Gothenburg 252 370
Sulphur—
E. London, 2 t. 18 c. £27
Sulphuric Acid—
E London, 40 cs. £28
Beira, 15 23
Vladivostock, 4 20
Tartaric Acid—
E. London, 2 cs. £12
Dunedin, 5 c. 29
Bombay, 2 kgs. 14
Hiogo, 15 83

LIVERPOOL.

Period ending May 17th.

Acetic Acid—
Barcelona, 1 t. 6 c. £32
Alum—
Montreal, 3 t. 7 c. £30
Cadiz, 2 10
Ammonium Carbonate—
Hamburg, 10 c. 2 q. £13
Pernambuco, 12 2 31
Havana, 1 t. 2 39
Vigo, 13 1 22
Ammonium Muriate—
Trieste, 4 t. 19 c. £95
Rosario, 10 10
Ammonium Sulphate—
Barbadoes 50 t. 10 c. £615
Teneriffe, 5 60
Cullera, 142 4 110
Gd. Canary, 5 58
Valencia, 190 18 3 q 2 08
Antimony—
Vera Cruz, 8 c. £14
Antimony Sulphate—
New York, 1 t. 1 c. 2 q. £60
Arsenic—
B. Ayres, 4 t. £75
Basic Slag—
Palermo, 500 bgs. £55
Bleaching Powder—
Boston, 146 cks.
Genoa, 52
Halifax, 18
Karachi, 41
Leghorn, 28
Milwaukee, 15
Montreal, 38
Muncie, 57
New York, 255
Philadelphia, 81
Bone Ash—
Marseilles, 10 t. 2 c. £16 0
Boracic Acid—
Habana, 19 c. £28
Borax—
Montreal, 3 t. £49
Antwerp, 5 19 c. 3 q. 80
Rotterdam, 15 12 265
Hamburg, 12 6 203
Gibraltar, 5 5
Santos, 10 8
Gothenburg, 10 8
Calcium Carbide—
Cape Town, 5 cs. £8
E. London, 5 8
Calcium Chloride—
Gothenburg, 3 t. 11 c. £9
Sierra Leone, 2 15 7
Brisbane, 25 1 55
Adelaide, 10 25
Sydney. 10 3 22
Colombo, 1 1 2
Caustic Potash—
Melbourne, 2 t. 15 c. £86
Caustic Soda—
Adelaide, 69 dms.
Alexandria, 82
Barcelona, 155 5 brls.
Bombay, 30

Boston, 86 cks.
Buenostirus, 50
Charlotte Town, 10 pks.
Delagoa Bay, 40 cs,
Genoa, 35
Havana, 54
Hiogo, 213
Hong Kong, 7
Leghorn, 7
Malaga, 20
Maranham, 5
Melbourne, 73 10 bxs. 25
Messina, 45
Montreal, 60
Nicol, 3
Rio de Janeiro, 20
Santos, 36
Seville, 150 75 kgs 60 brls.
Sourabaya, 20
Sydney, 20
Talcahuano, 25
Tampico, 30
Trieste, 50

Chemicals *(otherwise undescribed)*

Madras,	17 t.	3 c.		£1 700
Galatz,	5	5		27
Bombay,		1		16
Philadelphia,	24	17		628
M. Video,	1			16
Natal	2			33
Adelaide,		10		9
Santander,	1	18		30
Havana	2	1		32
Antwerp,	5	2		80
Christiania,	1			16
Bilbao,	5	2		77
Barcelona,	11	10		174
Braila,	2			32
Melbourne,	1			17
Stettin,	1			29
Dunedin,		10		9
Sydney	6			100
Gothenburg,	1	9		44
Genoa,	5 cks.			44
Cairo,		10 brls.		33
Alexandria,		10		33
Calcutta,				172

China Clay—

Baltimore, 100 cks.
Bombay, 180
Boston, 300
Newport News, 966
New York, 8

Citric Acid—

Wellington, N.Z.,	1 c.		£6
Manila,	1		8
Vera Cruz,	4		26

Coal Products—

Aniline Colour

Alexandretta, 2 kgs.
Canada, 2
New York, 7 cks.

Carbolacene

Calcutta 2 t. 13 c. 2 q. £70

Carbolic Acid

Newport News,	5 t.			£314
Rotterdam,		3 c.		12
Hamburg,	9	13	1 q.	626
Para		11	3	10
Odessa,		16		49
Rosario,		7	2	33
New York,	6	19	2	4 4

Creosote Oil

Bordeaux 4 cks.
Lisbon, 250
N. Orleans, 1,600

Pitch

Antwerp, 203 t.

Copperas—

Gibraltar,	5 t.	6 c.		£8
Madras,	14	10		28
Callao,	4	10		7

Copper Sulphate—

Leghorn,	313 t.	6 c.	39.	£8,031
Marseilles,	19	14	3	493
Genoa,	108		1	7,197
Bordeaux,	886	8		20,352
Cette,	371	8	3	9,367
Lisbon,	13	1		371
Vigo,	24	12		651
Pontevedra,	3	2	1	84
Naples,	91	17	3	2,334
Brindisi,	16	11	2	416
Nantes,	90		3	2,338
St. John's N'fd,	4	3		97
Para,	3	1		4
Bari,	68	2	3	1,730
Abo,		5	1	7
Helsingfors		5	3	7
Almeria,	2	1		51
Pernambuco,		10		13
Venice,	357	14		9,136

Disinfectants—

Rio de Janeiro,	4 c.	2 q.	£9
E. London,	3 cs.		22
Ladysmith,		3	5

Iron Oxide—

Lisbon, 1 t. 6 c. £5

Magnesia—

Havre, 20 cs.
Tampico, 1

Magnesium Chloride—

Genoa, 7 t. 12 c. £18
Oporto, 2 5

Manganese Oxide—

Antwerp, 1 t. £10

Manure—

Teneriffe, 20 t. £65
Las Palmas, 4 39

Muriatic Acid—

Rosario, 70 crbys.
B. Ayres, 30

Naphtionate—

New York, 9 cks. £118

Paint—

Algoa Bay, 1 ck.
Alexandria, 440 kgs.
Belize, 485 8 12 dms.
Benguela, 300 6 cks.
Bolivia, 6 cs.
B. Ayres, 1 6
Calcutta, 11
Callao, 170
Havana, 12 dms.
Iquique, 10
Iquitos, 14
Juagua, 60 90
Jeremie, 5
Lawzarote, 90
Lisbon, 40 19 138 pks.
Loanda, 3
Madrid, 4 bxs.
Malta, 2 cks.
Manaos, 19
M. Video, 10
Mossamedes, 7
Opobo, 5
San Juan, 6
Panama, 14 dms.

Painters' Colours—

Bahia, 20 kgs. 4 cs. 26 brls.
Canea, 48 5
Corfu, 8
E. London, 6 1 ck.
Leghorn, 2 bxs.
Manaos, 6
Montreal, 11

Paraffin Wax—

Trieste, 10 cs.
Vera Cruz. 110 bgs.

Pearl Ash—

Melbourne, 1 t. 11 c. £40

Phosphorus—

Rosario, 1 c. 2 q. £10
B. Ayres, 1 3 10

Potassium Bicarbonate—

Montreal, 5 c. £7

Potassium Bichromate—

B. Ayres, 3 t. 1 q. £98
Genoa, 10 c. 1 17
Helsingfors, 7 12

Potassium Chlorate—

Alexandria,	1 t.		£30
Hamburg,	7	10 c	229
Hiogo,	7	10	240
New York,	10		310
Riga,	9	16	306
Rotterdam,		19	31
Shanghai,	8	10	280
Vera Cruz,	1	10	45

Potassium Muriate—

Montreal, 5 t. £49

Potassium Prussiate—

Vigo, 1 c. £4

Potassium Tartrate—

Habana, 5 c. 2 q. £35

Salammoniac—

Alexandria,	1 t.			£32
Beyrout,	1 t.	10 c.		£45
B. Ayres,	20 cks.			171
Fiume,	2	3		14
Genoa,		5	1 q.	8
S. Leone,		4	2	5
Tampico,		6	1	10
Trieste,	3	3		90

Salt—

Abonnema, 10 t.
Belize, 78 18 c.
Black River, 10
Boma, 11 3
Brussels, 10 8
Buenaventura, 100
Calcutta, 6974
Egewanga, 40
Ghent, 60
Halifax, 10
Kingston Jam., 30
Landanana, 45 19
Melbourne, 189 18
Montreal, 250
Noqui, 17 17
Rosario, 50
Rotterdam, 200
Old Calabar, 80 3
Shanghai, 16 cs.

Salt Cake—

Baltimore, 101 t. 7 c. £163

Saltpetre—

Cabedello, 1 t. 10 c. £33
Para, 1 10 35

Sheep Dip—

Belize, 9 c. 1 q. £16
Cape Town, 1 t. 15 51
B. Ayres, 184 4 2 1,861
Punta Arenas, 3 5 110
Hobart, 50 dms. 40

Soap—

Alexandria, 17 cs. 7 crts.
Algoa Bay, 385 bxs. 7
Bombay, 2
Buenos Ayres, 1
Ballao, 25
Colombo, 200
Dunkirk, 220
Durban, 150
Johannesburg, 30 50
Karachi, 105
L. Palmas, 5
Li bon, 1
Loanda, 6
Madras, 10 35
Malta, 106
New York, 10
Piræus, 45
Pt. Said, 26 41
Rangoon, 121
St. John's, N'fd 40
Shanghai, 10
Singapore, 506
Trinidad, 1
Valparaiso,

Soap Lyes—

Hamburg, 81 t. £2,187

Soda Ash—

Aalborg,	200 bgs.			
Antwerp,	1,350			
Barcelona,			50 cks.	
B. Ayres,		30 brls.	50	
Copenhagen,	80			
Galt,	50			
Genoa,	720 kgs.			
Ghent,	534 bgs.			
Gothenburg.	50			
Leghorn,	24		44	
Libau,	500			
Montreal,	160			
New York,	52 tcs.		432 kgs.	
Oporto,			3 cks.	
Para.			5	
Piræus,		20 brls.		
Rio Janeiro,			15	
Rio Grande do Sul,			306	
St Petersburg,			742	
Sourabaya,			50	
Toronto,	20 bgs.		82	
Trebizonde,	50			
Yokohama,	200			

Soda Crystals—

Brandford, Ont., 50 kgs. 100 brls.
Calcutta 4 cks
Johannesburg, 40
Lisbon, 30
Montreal 500 bgs. 25 brls.
New York, 200 kgs 140
Pt Said, 10
Seville, 35

Sodium Bicarbonate—

Alexandria. 24 kgs.
Brantford, Ont., 50 dms.
B. Ayres, 110 cks.
Constantinople, 215
Corunna, 4
Fairwater, 203
Gijon, 10
Havre, 10
Ibrail, 35
Kingston, Jam., 40 6
Malta, 14 14 dms.
Montreal, 100 bgs. 12 cks.
Oporto, 40 kgs.
Para, 10
Penang 9
Rotterdam, 50
Salonica 60
Santander, 60
Seville, 310 brls.
Vigo, 20

Sodium Carbonate—

New York. 56 brls.

Sodium Chlorate—

Rotterdam, 5 c. £9

Sodium Naphthionate—

New York, 9 cks.

Sodium Sulphate

Montreal, 40 brls.
Quebec, 53 cks.

Sodium Tartrate—

Havana, 4 cks.

Sulphate of Lime—

New York, 1 t. 4 c. £6

Sulphur—

Boston,	75 t.	3 c.		£320
Calcutta,	25			121
Ghent,	6			26
Halifax,	3	7		20
Lisbon,	7	10		43
Montreal,	25	1		107
Para,	1	5		5

Superphosphates—

Arneas,	3 t.			£8
Canary,	10			23
Hong Kong,	50			133
Las Palmas,	30			68
Nantes,	93	10 c.		185
Valencia,	159	13		354
Yokohama,	10			54

Tarteric Acid—

Havana, 2 c. £14

Varnish—

Bahia. 2 cs.
Batavia, 6
Benguella, 1
Cape Town, 9
Havana, 1
Hong Kong, 2
Lisbon, 1

White Lead—

Malta, 5 dms.

Yellow Prussiate—

Boston, 4 t. 19 c. 2 q. £272

Zinc Chloride—

Ghent, 1 t. 6 c. £10

MANCHESTER.

Period ending May 17th.

Copperas—

Alexandria, 70 brls.
Mohammerah, 30

Coal Products—

Aniline Colours

Belgium, 2 cs.
Germany, 1

Aniline Oil

Belgium, 4 dms.

Carbolic Acid

Germany. 25 cks.

Colours—

Belgium, 1 kg.

Glue—

Germany, 10 cks.
Holland, 12

Linseed Oil—

Beyrout, 6 brls.
Mersey, 2

Naphthylamine—

Germany, 27 cks.

Paint—

Jaffa, 2 cks.

Soap—

Alexandria, 11 cs.
Bombay, 18 cks.
Mohammerah, 50 bxs.

Sodium Naphthionate—

Germany, 18 cks.

Turpentine—

Beyrout, 1 brl.

Varnish—

Beyrout, 1 cs.

Venetian Red—

Jaffa. 2 brls.

Zinc Chloride—

Germany, 20 cks.

HULL.

Week ending May 13th.

Alkali—

Raumo 100 cks.

Ammonium Sulphate—

Dunkirk, 193 bgs.

Bleaching Powder—

Boston, 82 cks.

Caustic Soda —
Reval, 50 cks. 20 dms.
Wyburg, 22
Chemicals (*otherwise undescribed*)
Abo, 2 cks.
Amsterdam, 44 24 pks.
Antwerp, 267
Bremen, 1 cs.
Christiania, { 4 25 / 532 slbs.
Copenhagen, 10
Danzig, 12
Gothenburg, 8 367
Hamburg, 20 152
Hango, 1
Helsingfors, 3 1
New York, 27
Reval, 7
Riga, 2 pks.
Rotterdam, 276
Rouen, 61
St. Petersburg, 14 60
Stettin, 8 72
Stockholm, 10 18
Coal Products—
Creosote
New York, 500 brls.
Pitch
Aalesund, 30 cks.
Abo, 1
Antwerp, 346 t.
Helsingfors, 83 cks.
Rouen, 180 t.
Wyburg, 6 cks.
Tar
Aalesund, 2 cks.
Abo, 2
Amsterdam, 16
Antwerp, 3
Copenhagen, 15
Helsingfors, 152
Konigsberg, 3
Rotterdam, 23
Stettin, 5
Stockholm, 10
Cottonseed Oil—
Amsterdam, 10 t. 1 c.
Copenhagen, 15
Dunkirk, 5 3
Ghent, 9 17
Gothenburg, 9 4
Hamburg, 5 13
Norrkoping, 2
Rotterdam, 51 9
Rouen, 2 11
Stockholm, 25 4
Dyestuffs (*otherwise undescribed*)
Danzig, 1 cs.
Drontheim, 2
Glue—
Amsterdam, 10 bgs.
New York, 26 cks.
Linseed Oil—
Amsterdam, 10 t. 11 c.
Bergen, 18
Christiania, 12 6
Hamburg, 19 6
Helsingfors, 29 14
Stavanger, 4 8
Paint—
Antwerp, 10 cks.
Christiania, 2
Rotterdam, 1
Painters' Colours—
Antwerp, 110 cks. 9 28 51 dms.
Bergen, 1 10
Boston, 4
Christiania, 21 3
Copenhagen, 5 2 1 pk.
Drontheim, 1
Dunkirk, 3
Ghent, 5 113 dms.
Gothenburg, 4 1 1
Hamburg, 36 6
Helsingfors, 159 16
New York, 252 15
Riga, 1
Rotterdam, 2 170
St Petersburg, 150 1
Stavanger, 2
Stettin, 15 5 342 pks.
Soap—
Drontheim, 50 cs.
Helsingfors, 21
Konigsberg, 1
Tallow—
Christiania, 14 cks.
Stockholm, 5
Varnish—
Amsterdam, 1 cs.
Antwerp, 1
Christiania, 3 2 dms.
Drontheim, 1 ck,
Gothenburg, 2
Hamburg, 1
Helsingfors, 2 2
Rotterdam, 5
St. Petersburg, 2
Stavanger, 1
Stettin, 9
Stockholm, 2

GLASGOW.

Week ending May 18th.

Acids—
Mauritius, £20
Ammonium Sulphate—
Christiania, 2 t. 10 c.
Colombo, 10
Kobe, 49 13 c. 2 q.
Palermo, 10 7
U.S.A., 30 18 3
Benzine—
St. Nazaire, £136
Benzoline—
Rotterdam, £429
Bleaching Powder—
Calcutta, 96 t. 13 c.
Rio de Janeiro, 5 17 1 q.
Bones—
Rouen, £60
Borax—
Egypt, 50 t.
Riga, 18 5 c.
Rotterdam, £148
Caoutchouc—
Christiania, £268 16s.
Chemicals (*otherwise undescribed*)
Montreal, £29
Coal Products—
Carbolic Acid
Christiania, £12 10s.
Rotterdam, 121
Creosote Oil
Christiania, £52
Pitch
Antwerp, £188
Bombay, 23
Calcutta, 34
Canada, 365
Sables d'Olonne, 1,355
Tar
Bombay, £152
Calcutta, 237 15s.
Christiania, 25
Danzig, 560
Hamburg, 16 10
Karachi, 66
Montreal, 40
St. Petersburg, 479
Iodine—
Rotterdam, £1,260
Lead Acetate—
Stockholm, £68
Linseed Oil—
Canada, 8 t. 14 c. 1 q.
Cape Town, 4 13 2
Havana, 3 8 2
Hong Kong, 1 4
Malta, 18 1
Litharge—
Bombay, £28
Logwood Extract—
Australia, £30
Stockholm. 214
Magnesium Sulphate—
Christiania, 10 t.
Manganese—
Rotterdam, £120
Paint—
Calcutta, £77 12s.
Colombo, 47 10
Havana, 203
Hong Kong, 70
Natal, 260
Pt. Said. 20
Painters' Colours—
Adelaide, £52 13s.
Alexandria, 39
Bergen, 6
Bombay, 133
Calcutta, 322 11s.
Cape Town, 22 19
Durban, 288 18
Malta, 20 12
Mauritius, 54
Montreal, 267
Natal, 32 15
Port Piria, 27 17
U.S.A., 64
Paraffin Wax—
Fiume, £22
Palermo, 31
Paris, 65
Rio de Janeiro, 50
Stockholm, 136 10s.
Trieste, 148
Potassium Bicarbonate—
Antwerp, £79
Bombay, 75
Hiogo, 76
Madras, 136
Montreal, 279
Paris, 448
Quebec, 146
Rouen, 135
Stockholm, 260
Potassium Bichromate—
Amsterdam, £145
Potassium Cyanide—
U.S.A., £886
Potassium Prussiate—
New York, £150
Red Lead—
Stockholm, £85
Rosin—
Calcutta, 19 t. 15 c.
Saltpetre—
Canada, £30
Sheep Dip—
Montreal, £175
Soap—
Algoa Bay, 2 t. 2 c. 2 q.
Bombay, 4 1
Sodium Bicarbonate—
Antwerp, 6 t. 19 c. 1 q.
Bombay, 2 14 2
Paris, 2 5
Rouen, 11 1
Sodium Nitrate—
Canada, £125
Tallow—
Rotterdam, 20 t. 12 c.
Transvaal, 19
White Lead—
Algoa Bay, £24
Cape Town, 72 10s.
Johannesburg, 49 15
Malta, 62 15
Singapore, 29
Zinc White—
Alexandria, £20

TYNE.

Week ending May 13th.

Alkali—
Amsterdam, 18 t. 16 c. 3 q.
Christiania, 6 13 3
Riga, 13 18 1
Rotterdam, 10 2 1
St. Petersburg, 51
Ammonium Carbonate—
St. Petersburg, 4 t. 10 c.
Ammonium Muriate—
Gothenburg, 3 t. 12 c. 1 q.
Antimony—
Copenhagen, 6 c.
Rotterdam, 5 t.
St. Petersburg, 45
Barium Binoxide—
Rouen, 26 t. 13 c. 1 q.
Barium Carbonate—
St. Petersburg, 40 t. 14 c.
Bleaching Powder—
Aarhuus, 5 t. 1 c. 1 q.
Amsterdam, 45 1
Antwerp, 52 17 1
Bergen, 9 16 3
Copenhagen, 9 9 2
Gothenburg, 15 2 1
Hamburg, 27 13 3
Riga, 9 10 1
Rotterdam, 7 6 3
St. Petersburg, 105 12 2
Caustic Soda—
Amsterdam, 6 t. 14 c. 2 q.
Bergen, 1 3 1
Christiania, 6 13 2
Copenhagen, 1 18
Gothenburg, 9 17 1
Rotterdam, 2 1
Wasa, 2 7
China Clay—
Copenhagen, 15 t. 3 c. 3 q.
Coal Products—
Pitch
Rouen, 20 t.
Fluor Spar—
Gothenburg, 75 t.
Litharge—
Amsterdam, 11 c. 3 q.
Hamburg, 3 t. 5 3
Riga, 4 4
Rouen, 1 14 2
Magnesia—
Hamburg, 11 c. 3 q.
Rotterdam, 1
Manganese—
Rouen, 1 t. 13 c. 1 q.
Paint—
Antwerp, 1 t. 15 c.
Bergen, 1 17
Christiania, 1 2 q.
Hamburg, 3 17
Painters' Colours—
Rotterdam, 11 dms.
Red Lead—
Amsterdam, 2 t. 15 c. 3 q.
Bergen, 2 5 2
Copenhagen, 5 5 2
Gothenburg, 2 15
Hamburg, { 8 11 3 / 19 cks.
Lisbon, 38
Rotterdam, 1 t. 7 2
St. Petersburg, 55 3
Salammoniac—
Gothenburg, 1 t. 3 c. 2 q.
St. Petersburg, 20 9 3
Soda—
Amsterdam, 30 t. 4 c. 3 q.
Christiania, 29 9 1
Rotterdam, 20
Wasa, 1 12 1
Soda Ash—
Abo, 105 t. 9 c. 1 q.
Gothenburg, 50 6
Lisbon, 23 cks.
Sodium Prussiate—
St. Petersburg, 5 t. 1 c. 1 q.
Sodium Sulphate—
Hernosand, 250 t.
Sulphur—
Bergen, 5 t.
Christiania, 20
Gothenburg, 70
White Lead—
Copenhagen, 5 t. 15 c. 1 q.

GOOLE.

Week ending May 10th.

Chemicals (*otherwise undescribed*)
Hamburg, 1 dm. 8 pks.
Rotterdam. 24 cks.
Coal Products (*otherwise undes.*)—
Amsterdam, 90 cks.
Antwerp, 8
Ghent, 6
Rotterdam, 1
Coal Products—
Pitch
Antwerp, 754 t.
Dyestuffs (*otherwise undescribed*)
Hamburg, 60 bgs.
Rotterdam, 44 cks.
Dyestuffs—
Logwood
Hamburg, 57 t.
Manure—
Ghent, 88 bgs.
Hamburg, 1,037
Painters' Colours—
Amsterdam, 1 cs.
Ghent, 2 pks.
Hamburg, 1 ck. 24
Rotterdam, 13

GRIMSBY.

Week ending May 13th.

Caoutchouc—
Esbjerg, 4 pks.
Gothenburg, 2 bs.
Chemicals (*otherwise undescribed*)
Dieppe. 12 cs.
Hamburg, 100 dms.
Coal Products (*otherwise undes.*)—
Dieppe, 253 cks.
Hamburg, 7 cs. 7 pks.
Coal Products—
Pitch
Antwerp, 72 t.
Painters' Colours—
Antwerp, 1 ck.
Hamburg, { 1 kg. / 2 cks.
Rotterdam, 1

PRICES CURRENT.

WEDNESDAY, May 24, 1899.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9	&	8/3
,, Glacial .. .. ,,		35/-	
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	9
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	0	11½
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	1
Tartaric .. .. ,,	0	1	0
Arsenic, white powdered .. .. nett per ton	19	0	0
Alum, loose lump .. .. ,,	4	5	0
Alumina Sulphate (pure) .. .. ,,	3	15	0
Aluminoferric .. .. ,,	2	2	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2¾
,, = 24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3¼
,, Muriate .. .. per ton	18	15	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	12	12	6
,, ,, (grey) Hull .. .. ,,	12	7	6
Aniline Oil (pure) .. .. per lb.	0	0	4½
Aniline Salt ,, ... ,,	0	0	4
Antimony .. .. per ton	39	5	0
,, (tartar emetic) .. .. per lb.	0	0	8
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	4	5	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6¼
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. ,,	17/-	to	25/-
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 3 % A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	7
,, 50/90 ,, ... ,,	0	0	7½
Carbolic Acid (crude 60°) .. .. ,,	0	1	11½
,, (crystallised 40°) .. .. .. per lb.	0	0	6¾
,, (liquid 95/97%) .. .. .. per gallon	0	1	0
Creosote (ordinary) .. .. ,,	0	0	3½
,, (filtered for Lucigen light) .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	3	0	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	5	0
Solvent Naphtha, 90% at 160° .. .. per gallon	0	0	10
Copper .. .. per ton	78	10	0
,, Sulphate .. .. ,,	26	10	0
,, Oxide (copper scales) .. .. ,,	57	0	0
Glycerine (crude) 80% .. .. ,,	24	0	0
,, (distilled S.G. 1250°) .. .. ,,	48	10	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	2	6
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	15	10	0
,, Litharge Flake (ex ship) .. .. ,,	17	0	0
,, Acetate (white ,,) .. .. ,,	24	0	0
,, ,, (brown ,,) .. .. ,,	18	10	0
,, Carbonate (white lead) pure .. .. .. ,,	18	10	0
,, Nitrate .. .. ,,	22	10	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	4	17	6
,, ,, (grey) (ex ship) .. .. ,,	8	0	0
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton	9	10	0
,, Sulphate (Epsom Salts) .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	14	15	0
,, Borate .. .. per cwt.	2	0	0
,, Ore, 70% .. .. per ton	3	10	0
Methylated Spirit, 61° O.P .. .. per gallon	0	2	0
Naphtha (Wood), Solvent .. .. ,,	0	3	0
,, ,, Miscible, 60° O.P. .. .. ,,	0	3	9
Oils:—			
Cotton-seed .. .. per ton	17	10	0
Linseed .. .. ,,	19	10	0
Stearine .. .. ,,	26	0	0
Phosphorus (Yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	15	0
,, Chlorate .. .. per lb.	0	0	3½
,, Cyanide, 98 % .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) 90 % .. .. per ton	22	0	0
,, ,, ,, 75/80 % .. ,,	17	15	0
,, Potash Hydrate Liquid 50 % .. .. ,,	11	5	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	2	12	6
,, Prussiate Yellow .. .. per lb.	0	0	8¼
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	0
,, Muriate, 80 % ,, ... ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	4½
Sodium (metal) .. .. per lb.	0	2	9
,, Carb. (refined Soda-ash) 48 % .. nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	5	0
,, ,, (Carb. Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Soda Crystals) .. .. .. ,, ,, (f.o.r. w'ks.)	2	10	0
,, Acetate (ex-ship) .. .. ,,	12	15	0
,, Arseniate, 45 % .. .. ,,	13	10	0
,, Chlorate .. .. per lb.	0	0	3¾
,, Borate (Borax) .. .. nett per ton	16	0	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton (10 ton lots)	7	12	6
,, ,, (74 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	0	0
,, ,, (60 % Caustic Soda) .. ,, ,, (10 ton lots)	6	0	0
,, ,, (pure liquor 90° Tw.) .. ,, ,, (10 ton lots)	3	10	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate (cwt. kegs) .. .. ,,	6	15	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25 % .. .. ,,	15	10	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	9
,, Nitrite, 98 % .. .. per ton	26	0	0
,, Phosphate .. .. ,,	10	7	6
,, Prussiate .. .. per lb.	0	0	6½
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. ,,	3	10	0
,, Stannate, 40 % .. .. per cwt.	3	10	0
,, Sulphate (Salt-cake) .. .. per ton	1	7	6
,, ,, (Glauber's Salts) .. .. .. ,,	1	12	6
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	5	2	6
Strontium Hydrate, 100 % .. .. ,,	9	10	0
Sulphocyanide Ammonium, 95 % .. .. .. per lb.	0	0	5¼
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton	6	15	0
,, (Roll Brimstone) .... ,,	6	0	0
,, Brimstone: Best quality .. .. ,,	4	12	6
Superphosphate of Lime (26 %) .. .. ,,	2	10	0
Tallow .. .. ,,	24	0	0
Tin Crystals .. .. per lb.	0	0	7¾
,, English Ingots .. .. per ton	121	5	0
Zinc (Spelter) .. .. ,,	28	10	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	7	10	0
,, Sulphate, Crystal .. .. ,,	7	15	0

THE

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CURRENT TOPICS.

RUSSIAN INDUSTRIAL DEVELOPMENT.

ON more than one occasion during the last two years we have referred to the possibilities of South Russia for capitalists of average means. Since then there have been several instances of recent progress chronicled in our columns, and we have yet to add another to the list.

The activity of the iron, coal, steel, brick, and cement trades in the Taganrog district shows no sign of abatement, and, despite the opposition of a section of the Russian Press, there is no doubt about the fact that British enterprise is beginning to find its way more extensively into the metallurgical and coal districts. It is high time it did so, for the Americans and Germans are most assiduous in their endeavours to promote business.

Quite recently a new chemical venture has been started. The consent of the Emperor and the Committee of Ministers having been obtained, a company has been formed with a capital of about £624,000. in British money, divided into 24,000 shares of £26. each.

The principal object of the company is the chemical treatment of wood, and also of all sorts of industrial and animal refuse, in order to extract the useful products as practised in Germany by patented processes. The company has acquired factories already established in Russia by the German company, and is authorised to establish others for the same purpose in all the provinces of the Empire.

The promoters are Count Heiden, a great landowner, together with other landowners of high standing and of Russian nationality, and Mr. A. Schmidt, a German subject, manager of an important German industrial company at Cassel.

It is noticeable that British interests are not represented in this new concern. No doubt the supposed difficulty of mastering the language will stand in the way of a good many who might otherwise feel disposed to expend their energies in this almost virgin field, but the difficulty of the language is by no means insurmountable. According to the statements of Mr. Consul H. W. Hunt—and he speaks from experience—it is a certain fact that contracts and orders are nowhere more likely to be secured than in Russia, if sought for by educated men of the world. In six months, a man of average linguistic ability, living in Russia, can acquire sufficient knowledge of Russian to make him a valuable travelling agent, or enable him to run a business for himself.

THE SALT MONOPOLY.

While the Salt Union Ltd. has been running its chequered course, many rumours have been current concerning the failure of the Union to maintain anything like the reasonable monopoly, on the existence of which most of its prospects of success depended. These rumours have become more tangible of late, and elsewhere in this issue we give some figures which show that there are enough salt pans in operation, outside the control of the Union, to produce sufficient

salt to meet one half of the total demand in the United Kingdom.

We are quite cognisant that many of the pans included in the list are not at liberty to produce for the public, but are worked to fill the needs of the heavy chemical trade; still, with such a formidable array of independent producers—19 and possibly 20—there is no gainsaying the belief that when the chemical trade is dull, these pans will be kept running by making for sale to the community at-large; and in the present times of small profits and foreign competition, this procedure would, we fear, go a long way towards taking the gilt off the Union's gingerbread-profits.

EXPORTS OF PETROLEUM FROM U.S.A.

THE Chief of the Bureau of Statistics at Washington gives the following returns of the exports of petroleum and petroleum products for February. The total shipments were 51,659,280 gallons, compared with 62,091,132 gallons in 1898. The total for the 8 months ending February, 1899, was 610,886,771 gallons, against 680,095,533 gallons in the same period of 1898. The details of the shipments are as follows:—

			Gallons.
CRUDE PETROLEUM.			
Total, February,	1899	.....	4,378,646
,, ,,	1898	.....	5,113.967
NAPHTHAS.			
Total, February,	1899	.....	1,487,928
,, ,,	1898	.....	1,266,797
ILLUMINATING.			
Total, February,	1899	.....	41,155,202
,, ,,	1898	.....	49,228,120
LUBRICATING AND PARAFFIN.			
Total, February,	1899	.....	4,187,264
,, ,,	1898	.....	4,018,612
RESIDUUM.			
Total, February,	1899	.....	450,240
,, ,,	1898	.....	2,463,636

THE SALT UNION AND OUTSIDE PRODUCERS.

IT will be remembered that when the Salt Union was formed it comprised all the known salt works and rock pits. Another feature was the granting of a subsidy to a number of landowners in the Cheshire districts on the understanding that they were not to allow their land to be used for the purpose of salt making.

The Salt Union, even with its enormous capital and heavy annual charges, would have been able to pay handsome dividends had it been able to maintain its monopoly. That it has not been able to do so may be seen by a glance at the following list of salt works now working outside the Union. In addition to these there are reports of another outside company, to be called the Liverpool Salt Company:—

		Pans
The United Alkali Co., Limited	Middlesbrough	44
The owners of the Middlesbrough Estate	—	12
The Hartlepool Salt and Brine Co.	—	18
The Tees Salt Co.	Stockton	27
The Cleveland Salt Co.	Greatham	16
The Barrow Salt Co., Limited	Barrow	24
The Fleetwood Salt Co.	Fleetwood	26
The Dairy and Domestic Salt Co.	Middlewich....	11
Henry Seddon	ditto	7
Messrs Amans Salt Co.	ditto	7
Messrs. Murgatroyds Salt Co.	ditto	11
H. I. Thompson	Northwich	10
Messrs. Rayner and Howard.....	ditto	5
A. J. Thompson.....	ditto	8
Messrs. Bowman, Thompson, and Co.....	ditto	30
Messrs. George Hamlett and Sons.....	Winsford	10
John Garner	ditto	25
Messrs. the Stafford Salt Co.	Stafford	9
Messrs. Stubbs and Co.....	ditto	4
Total.....		304

With an average outturn of 50 tons per pan per week, these outside firms can produce over 750,000 tons of salt annually, or more than half *the* total demand of the United Kingdom.

THE SULPHUR COMPOUNDS OF CALCIUM CARBIDE.

AN important research upon the impurities existing in ordinary carbide has recently been published by Dr. N. Caro, of Berlin, which deals chiefly with the question of sulphur compounds, and the way they are decomposed when the carbide is acted upon by water. The first sample he tested contained 0·39 per cent. of sulphur, and when water was allowed to drip upon it, 93 to 94·5 per cent. of this impurity appeared in the acetylene, 6·5 to 5·5 per cent. remaining with the lime. When the same carbide was dropped into water, 15·7 per cent. of the sulphur passed into the gas, 84·3 per cent. remaining behind. Another sample, obtained from the Bitterfeld works, which contained 0·25 per cent. of sulphur but no aluminium compounds, gave 2·8 per cent. of its sulphur to the acetylene when decomposed on the carbide-to-water principle, 94·9 per cent. when water was dropped upon it. Moreover, Dr. Caro finds that the amount of sulphur mixed with the acetylene when carbide is added to water consists almost entirely of sulphuretted hydrogen, the 15·7 per cent mentioned above being made up of 15·4 per cent. of this gas and 0·3 per cent. of some organic compound; with carbide free from aluminum, the volatile sulphur is wholly in the form of sulphuretted hydrogen, and is thus partly or completely retained by the water in the generator. Of the 93 to 94·5 per cent. of sulphur in acetylene prepared by causing water to fall upon carbide, only 61 to 71 per cent. consists of sulphuretted hydrogen, the remaining 22 to 34 per cent, being composed roughly of three parts of some sulphur compound which is retained by washing the gas with a mixture of ether and petroleum spirit, and one part (equal to 5 or 8 per cent. of the total sulphur) of a compound which is not so retained. This latter impurity is readily destroyed by chromic acid and by acid cuprous chloride, but is scarcely, if at all, attacked by chloride of lime. Hence it appears that sulphur is liable to be present in crude acetylene in two distinct varieties analogous to the sulphuretted hydrogen and the "sulphur compounds" of the coal-gas makers, the former of which is easily extracted; the latter is more troublesome. Carbide-to-water acetylene contains no sulphur except sulphuretted hydrogen, and comparatively little of that, and a wash in water is sufficient to purify it; water to carbide acetylene contains far more sulphur, and it exists in such modifications that scrubbing with water only removes about two-thirds of it—*i.e.*, that proportion which is actually sulphuretted hydrogen—chemical purification being necessary to recover the residue. Dr. Caro considers the sulphur compound which is dissolved by washing with ether and petroleum spirit to be of the nature of oil of mustard; other cheaper washing liquids might therefore be available.

Breach of the Potting Trade Rules.—At the Stoke-on-Trent Police Court recently, Messrs. Bailey and Cooper, earthenware manufacturers, of London Road, Stoke, were charged with having committed a breach of the special potting trade rules drawn up by the Home Office. The rules provide that ground laying shall not be done except where exhaust fans are provided for the effectual removal of dust, and it was stated that the defendants had not provided such fans. Mr. Holtom, who appeared for the defendants, pleaded guilty. He said the omission to provide fans was due to difficulties which came in the way of the firm when considering what sort of fans to provide. Mr. Walmsley, inspector of factories, said this was the first prosecution of the kind which had taken place in the district. The Stipendiary Magistrate find the defendants 10s. and costs (7s. 6d.), remarking that in future such cases would not be so leniently dealt with.

Gas Explosion at Carlisle.—On Sunday morning a terrific explosion occurred in the retort house of the Carlisle Gas Works, the property of the Corporation, resulting in serious injury to three workmen, named Robert Little, David Burton, and Robert Gilliland, of whom the first-named has been ten years and the other two twenty years in the employment of the Corporation. Usually gas is not manufactured on Sundays, and the men were engaged in cleaning the dips in the hydraulic main, an operation which they have frequently performed. They had removed the dip pipe, and were about to clean it, when, by some means hitherto unexplained, the gas issuing from the opening in the hydraulic main became ignited, and an explosion took place, which was heard a mile and a half away. The three men were seriously injured by the force of the explosion, and severely burnt about the head and face by the hot tar ejected from the main. Their faces were blackened beyond recognition. One of the three got down from the main by the ladder on which he had been standing, but the other two were so blinded that they could not move, and had to be helped down from the top of the retorts, a distance of about 18ft. The foreman of the works, Osborne, was promptly on the spot, and doctors were summoned immediately. They ordered the injured men to be removed to the Cumberland Infirmary. Their condition is considered serious. Mr. Newton, engineer of the works, was soon in attendance. He states that the damage to the works is small, and that it will not interfere with the daily routine.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Drying Superphosphate. A. G. Brookes. 10,204. May 15.

Liquid Feed Devices for Electrolytic Apparatus. R. Girouard. 10,205. May 15.

Electrolytic Apparatus. M. Haas. 10,215. May 15.

Preparing Hydrate of Alumina to be Used in Producing Metallic Aluminium. C. F. Claus. 10,233. May 15.

Obtaining Alumina with Fluorine and Alkaline Fluorides and Producing the Alkaline Fluorides to be Used therein. C. F. Claus. 10,245. May 15.

Fixing Alumina or Chromic Oxide on Textile Fibres as Mordants. H. von Niederhausern. 10,293. May 16.

Re-heating Compressed Air for Industrial Purposes. C. K. Mills. 10,312. May 16.

Manufacture of Ink. J. F. Duke. 10,319. May 16.

Improvements in Electrodes and Feeding Devices for Electrolytic Apparatus. H. Carmichael. 10,320. May 16.

Improved Soap Frame. H. D. Morgan. 10,362. May 17.

Bacterial Sewage Filters. W. M. Ducat. 10,386. May 17.

Refining Petroleum. T. Macalpine. 10,391. May 17.

Evaporating and De-hydrating Substances. W. Mather. 10,404. May 17.

Extracting Tannin from Leather and Preparing it for Glue Making. R. Brauer. 10,408. May 17.

Purifying and Filtering Trade Effluents, etc. M. May, junr. 10,412. May 17.

Bacterial Treatment of Sewage. T. H. Ramsden. 10,494. May 18.

Preparing Mordants. F. M. Spence, D. D. Spence, and A. Shearer. 10,554. May 19.

Extracting Oxygen or Super-oxygenated Air from the Atmosphere. G. Claude. 10,617. May 19.

Deodorising, Bleaching, and Purifying. C. A. Sahlström. 10,619. May 19.

Drying Superphosphate of Lime. E. Lambert. 10,695. May 20.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Process and Apparatus for Producing Ammonia Cyanides, Coke, and Gas. P. Naef, 15, Third Avenue, New Brighton, S.T., New York, U.S.A. Eng. Pat. 9,462. April 25, 1898 (under International Convention, Sept. 25, 1897).

The cyanides formed in large amounts in the lower part of the blast furnaces used in making pig-iron are mostly destroyed in the upper part of the furnace. The gases are therefore drawn off at about half-way up the furnace and burnt in the production of coke (patent 7,951, 1898) or roasting limestone, producing ammonia. In the production of coke, the gas which escapes from the coking apparatus is valuable as an illuminant (after separating the ammonia) when suitably carburetted. There are two figures illustrating the apparatus employed.

Improvements in and connected with the Manufacture of Calcium Carbide and such like Compounds, the Reduction of Metallic Oxides, and the Melting and Refining of Steel and other Metals J. E. T. Woods, 38, Chantry-road, Stockwell, and W. A. Byrom, 32, Great St. Helens, London. Eng. Pat. 10,021. May 2, 1898.

In the manufacture of calcium carbide the reduction is brought about by the heat due to the combustion of gases. It is suggested that the difficulties hitherto encountered in this direction have been due to admitting enough air to produce perfect combustion, but the power of the gases appears to depend more on their affinity for oxygen; gases in which hydrogen and hydrocarbons predominate are therefore used. Such gas is produced by passing hydrocarbon vapours over heated oxide of iron, which gives spongy iron and a gaseous mixture of carbon monoxide, acetylene and marsh gas. On passing steam over the spongy iron hydrogen is formed and the iron re-oxidised. These gases are led into a holder and burnt in a domed carbide furnace through clusters of burners disposed in the walls of the furnace. There are four figures.

Improvements in the Treatment of Sewage. F. M. and D. D. Spence, Manchester Alum Works, Manchester. Eng. Pat. 11,574. May 23, 1898.

This patent only amplifies the method of recovering the fats and using sludge for manure as obtained by the neutralising and precipitation process described in patents 3,450, 1898, and 11,463, 1898 (*C.T.J.*, 617, p. 187, and 627, p. 347). It is claimed that the sludge after the extraction of the fat is *more valuable* as a fertiliser than when the *fat is left in.*

Improvements in the Manufacture of Ammonia and Ammonium Chloride and certain Bye-products. T. Cryer, of the Deanhead Chemical Co., Littleboro', Lancs. Eng. Pat 14,199. June 27, 1898.

Dolomite is decomposed with hydrochloric acid and the mixed chlorides heated with slaked lime, whereby the chlorine is combined with the extra lime and the magnesia obtained as a hydrate. Of course a solution of magnesium chloride obtained in any manner may be similarly treated. The separate hydrate of magnesia is boiled with sulphate of ammonia solution, ammonia gas being liberated and leaving a solution of Epsom salts, which is crystallised out. The residual calcium chloride solution is decomposed with sulphate of ammonia, producing sulphate of lime and ammonium chloride; or a certain quantity of zinc chloride may be added to produce a double chloride of zinc and ammonia.

Improvements in the Manufacture of Matches. O. Linder, 21, Wielanderstrasse, Nuremberg, Germany. Eng. Pat. 3,237. Feb. 14, 1899.

The match head is enlarged and covered with a feebly explosive mixture, which is tipped with a more readily explosive mixture, that ignites with friction. The matches are thus much safer when packed in boxes, and practically non-poisonous, owing to the small amount of phosphorus in the friction-ignited tipping paste, and the small quantity of this paste which is put on the head of each match.

TRUSTS IN THE UNITED STATES.

WHAT is to be done about trusts? The question is being asked all over America as the combinations for next year's electoral conflict are being considered. The aggregations of capital are being so rapidly piled up that it is not easy to keep pace with the movement of capital. However, the new York "Journal of Commerce" helps us with an estimate up to date which is indeed startling in its figures. We are told by this high authority that the total capital in trusts and combinations held in the form of stocks and bonds now reaches the gigantic sum of 5,832,882,842 dollars, and that the trust now embraces close on 90 per cent. of the manufacturing and mechanical industries of the United States. Such a phenomenon was never known before. It is practically impossible for any private individual to enter business in America as a manufacturer or producer. He must enter through the gateway of the trust or not at all. He may take a shop indeed if he thinks it will pay to compete with the huge stores which exist in every American city, or if he assumes that the overflow of distributing business from these stores will leave him a margin of profit sufficient to induce the investment of capital. But he literally cannot set up as a wool manufacturer, or an oil refiner, or the owner of a grain elevator, or a steel or iron manufacturer, or a cigar importer, or a rubber manufacturer, or a cotton spinner, or a whisky distiller. No law prevents him from doing these things, but the monopoly of the trust prevents him, and he is helpless. The Republican party press west of the Mississippi is at length alarmed at the aggressive attitude of aggregated capital, and is fearful lest the Republican party should be completely identified with the trusts, in which case an appalling disaster to the party is predicted next year. But the most remarkable demonstration against the combinations of rich men comes from one of the professors in the very seat of learning founded by the king of the millionaires, Mr. Rockefeller. Professor Small, of the University of Chicago, thus portrays the condition of America at the present hour:—"In this age of so-called democracy we are getting into the thrall of the most relentless system of economic oligarchy that history thus far records. The march of human progress is getting reducible to marking time in the lockstep of capital's chain gang. It would be infinitely more for human weal if every dollar of wealth should be cleaned from the earth, if we could have instead of it industry and honesty and justice and love and faith, than to be led much further into this devil's dance of capitalism." When a serious academic professor, paid from the funds furnished by the biggest capitalist in the world, writes like this it is evident that a condition of things has arrived of the gravest character. That next year will witness a tremendous conflict in the American Republic is plain. The Democratic party as a whole is going to attack the trust, though it is expected that Croker will sell out to the Republicans to save the situation. But if relief be not given soon, economic liberty in America will be as extinct as the dodo.—*Daily Chronicle.*

SOCIETY OF CHEMICAL INDUSTRY.—*London Section.* The last meeting of the Session will be held on Monday, June 5th, 1899, at 8 p.m., in the Chemical Society's Rooms, Burlington House, Piccadilly. The following papers, &c., will be read and discussed:—(1) "A New Method for the Analysis of Commercial Phenols," by Dr. S. B. Schryver. (2) "A Demonstration of Printing by Electricity without the aid of Rollers or Ink," by Dr. S. Rideal, F.I.C. (3) "Notes on Cacao Butter," by Dr. J. Lewkowitsch, F.I.C. (4) "The use of Iron as the Active Element in Primary Batteries used for Electrolysing," by Col. J. Waterhouse.

THE ST. HELENS EXPLOSION.

REPORTS OF THE OFFICIAL INQUIRIES.

THE GOVERNMENT INQUIRY.

COLONEL FORD, C.B., Chief Inspector of Explosives to the Home Office, opened an inquiry at St. Helens Town Hall on Thursday last week into the circumstances attending the recent explosion at Kurtz's Chemical Works at St. Helens (*C.T.J.* 626, p. 330). Mr. Hawkins, solicitor, represented the United Alkali Company, the proprietors of the works. The inspector, at the outset of the proceedings, said he proposed to hear what anyone had to say in the matter. The inquiry would be of an informal character, and evidence would not be taken on oath. Any person present who was in any way connected with the disaster would have an opportunity of saying anything he wished.

Mr. Hawkins said he had in attendance all the witnesses it was desirable the inspector should hear, and he proposed to call them. The first and probably the most interesting witness would be the person who was present when the fire commenced.

William Bates, apprentice cooper at the works, was then called. He said that on the morning of the disaster he was at the door of the crystallising house, unloading empty kegs from a truck. He received the kegs as they were handed to him out of the truck. As he received them he placed them on the ground and then rolled them through the doorway to the crystallising house, and between two rows of crystallising vats. He had two quite close to the doorway on their bilges, and then received another one. Instead of putting this third keg on its bilge he rested it on end on the floor and against one of the other two kegs. Its weight caused the others to run forward, and as the edges scraped together a spark flew out and fell upon a crystalliser. This was followed immediately by a blaze, which ran right along the vats. Witness did not stay to see any more but ran off and raised the alarm.

Replying to the Inspector, witness said the casks were brought from the central cooperage.

Matthew Brady, foreman cooper at Kurtz's works, said he had been employed there for the last 30 years. When the fire broke out he was in the crystallising house receiving the kegs as they were handed to him by the last witness, who was about ten or twelve yards away. After the kegs had passed the vats witness was piling them on end behind the crystallising house, intending to fill them afterwards with chlorate. He heard the alarm of fire, and turning round saw that the crystalliser nearest the door was in flames. He at once alarmed the men in the drying room and other parts of the works, and on his way back he heard the explosion.

The Inspector: Were those new casks?—Witness: They had been used before, and had been sent to us to be repacked.

The Inspector: What were you going to pack into them?—Witness: Blue powder.

The Inspector: How much would each hold?—Witness: About five hundredweight.

By Mr. Hawkins: They had come from Bryant and May's. They had contained chlorate before, and had been returned for another supply.

By the Inspector: They were lined with paper before being refilled.

Dr. T. T. Best, chemist and manager at Hardshaw Brook Works, which adjoin Kurtz's works, said he was standing on the boundary between the two establishments when his attention was called to large volumes of white smoke passing over the railway from the direction of Kurtz's chlorate refinery. He at once crossed the boundary, and went on to the waste bank to see if he could be of any assistance, and then proceeded to the refinery door. He looked inside and found that it was absolutely impossible to enter the place, as a fire was raging there, the flames running from vat to vat. The place was full of smoke, and he could not see very distinctly. He came to the conclusion that the place could not be saved and accordingly told the men to clear a long way off for safety. Some of the men suggested the advisability of trying to save the adjoining cooperage, saw mill, and waggon shop, and accordingly he sent across to the Hardshaw Brook Works for additional hose pipes. The fire in the meantime had burnt through the roof, and was forcing its way back to the storeroom roof. Witness thereupon looked inside the storeroom to see if there was any possibility of saving the building, but found there was none He could see nothing distinctly, the place being full of dense white smoke. He could just see the edges of the kegs near the right side of the doorway. Then the roof gave way and the whole place seemed to go. The flames shot up, and the contents of the place burnt away like a Roman candle. The heat was so intense that it was necessary to keep looking away. By that time the fire had burned down to within three feet of the ground, and white heat had been developed, giving the

APPEARANCE OF AN ELECTRIC ARC LIGHT;

and then there was a tremendous roar as if the whole thing was about *to burst. Witness and* the men who were near him ran for a distance of about forty yards, and then stopped to look round. They had no sooner done so than they heard the explosion, and saw the whole mass shoot up into the air. Witness was hurled to the ground, but got up immediately and looked to see where the other men were. He saw them running away, and the next moment he noticed a tremendous white, balloon-shaped cloud in the air, with a black burning mass in the centre. His first thought was that the boiler had exploded, but he was subsequently told that it was the chambers. Upon examination he found the chambers had collapsed.

Samuel Glover, manager of the Corporation gas works, said that at the moment of the explosion he was going towards the gas holder yard when he found that there was a fire at Kurtz's Works. He saw that it was a serious one and that the smoke was passing in the direction of the gas holders yard. The explosion then took place and the concussion struck one of the holders, shattering the side and ripping it right across the top. The gas escaping got ignited and burnt itself out in one huge flame twice as high as the chimney of the works.

Mr. Rudge, manager of Kurtz's Works, said that at the time of the explosion there were 156 tons of chlorate in the store house, packed in casks holding 1cwt. each. These casks were divided into two portions with a passage down the middle for convenienee for getting in and out. On the right side adjoining the crystallising house where the fire commenced was about 60cwt. of chlorate, 45cwt. in crystals, and 15cwt. in powder. Three casks of 5cwt. each were to be filled with fine powder chlorate for Messrs. Byrant and May. The empty 5cwt. casks were being taken out of the trucks and after being filled would have been sent straight away. They would not have been stored as they contained regular weekly orders. None of them passed into the store house. About a quarter past ten on the morning of the disaster witness had made a tour of the works and found everything proceeding as usual. Shortly afterwards he was inspecting the laying of some water pipes when he saw a cloud of smoke coming from the direction of the refinery, and then the explosion occurred.

Mr. Hawkins intimated that this was all the evidence he had to bring.

The inspector thereupon intimated that he should be glad to hear anything which any person might wish to say.

There being no response the Inspector added that that part of the inquiry was closed, and he expressed his indebtedness to Mr. Hawkins for the trouble he had taken in bringing forward the evidence.

THE ADJOURNED CORONER'S INQUIRY.

This inquiry was re-opened on Tuesday this week at the Town Hall, St. Helens, by Mr. Brighouse, the county coroner. The names of the victims were given in the *Journal*, No. 626 The United Alkali Company was represented by Mr. T. G. Horridge, instructed by Messrs. Forshaw and Hawkins, and there were present Mr. John Brock, chairman of directors, Sir David Gamble, Dr. Raschen (head chemist), Mr. T. W. Stuart (general manager), Ald M'Kechnie, Ald. J. C. Gamble, and Mr. Rudge. Mr. Stewart-Brown (instructed by Messrs. Boyle and Picton) appeared for the relatives of Richard Swift and for the executors of William Boyle, a property owner in the neighbourhood. Mr. H. L. Riley appeared for the relatives of Duffy and Gibson, and Mr. J. Cross Eccles for the relatives of Mr. Faram. Mr. Grant (inspector of factories), Mr. Jeeves (town clerk), and Chief Constable Wood were also present.

Colonel Ford, chief inspector of explosives for the Home Office, and Mr. H. S. Richmond, with Messrs. Eraut and Lauder, factory inspectors, were also present.

John Wood, locomotive driver at Kurtz's for sixteen years, said he took two trucks by means of his locomotive to the front of the chlorate refinery. The waggons contained empty 5 cwt. casks. A man named Bates was unloading them. He heard the alarm and saw the fire inside the house. He was sure no sparks came from his engine.

Cross-examined: He did not see anyone smoking. The engine had no spark arrestors on the chimney.

William Bates said he had worked at Kurtz's cooperage for eight years. He received the casks from the last witness at the refinery door. He had rolled eight casks into the crystallising house. He then put two casks down side by side, and afterwards put one leaning against these two. The weight of the third cask caused the two to move forward, and a spark flew from between the casks. The flame immediately flew up, and ran alongside the crystallising vats. He ran out and gave the alarm, and tried to turn on the water, but failed. The floor of the house was made of cement, and was damped with liquor. The sides of the vats might be dry. He was wearing a pair of clogs. The explosion occurred about five minutes after he ran away, in consequence of the heat. The floor of the crystallising house was brushed up every morning. He did not know it was usual for the floor of the chlorate house to be swilled with water every morning. He had seen the floor swilled occasionally. They always unloaded the casks from the waggon while the locomotive was standing near the door. He was never told to close the door and wait until the engine went away. There was a copy of instructions of what to do in

case of fire, the chief instructions being that men in the chlorate workers' clothes should go away for their own safety.

By the Jury: The hoops on the casks were of wood, but they were fastened on with iron nails. He did not know whether it would be better to have them nailed on with copper nails. The doors in the refinery were nearly always open, and the chlorate dust could get from one room to another.

The Coroner asked if evidence would be called to speak to the treatment the casks had received before being taken to the works to fill. By the evidence taken at the Home Office inquiry, he understood that they came from Bryant & May's. What the jury would want to know was what happened to the casks.

Mr. Horridge said he could not find anyone who could speak to the treatment of these particular casks, but he would call a witness to say what was done to all casks.

Colonel Ford: Did you ever observe a spark come from casks before in the way you have described?—Witness: No.

Alfred Rudge, manager of Kurtz's works, who at the time of the fire was at the pumping station, 800 yards away, inspecting the new water-pipe line, asked as to the precautions in case of fire, said that inside the mill-room they had eight buckets of water. There was also a large bath close by for the sake of the workmen if they got on fire and to fill the buckets. There was a hydrant inside the room within easy reach. They also possessed a works fire brigade of twelve men. The men inspected the works every first Saturday in each month. They examined the place six days before the explosion. There was a fire in the mill about four or five years ago, which was caused by a fitter's boy picking on the stones in the millroom with a chisel, and so creating a spark. Witness, continuing, said he had never known of anything approaching an explosion having occurred at the works. Chlorate of potash was not of itself an explosive. The crystallising house contained four rows of vats, six double in a row. They were filled with a solution of chlorate of potash in water, and held about 6cwt. each. The tanks were of wood, lined with lead. The store-room was close to, the casks on one side containing 96 tons. The casks on the other side contained 58 tons, about 15 tons of which was powdered chlorate. The powdered chlorate was near the door. The iron tanks in the adjoining crystallising room contained about ten tons.

The Coroner: I suppose it is common knowledge that this chlorate of potash is highly inflammable?—Witness: It is not inflammable in itself.

The Coroner asked if there was any necessity for such a quantity of chlorate being stored so near the drying and mill room of the refinery. In that case they had 156 tons of chlorate under the same roof as the drying room.—Witness said chlorate had hitherto been considered free from explosive tendency.

The Coroner: Well, not free from fire.—No.

The Coroner: The mischief has arisen from your stock being stored so near to where the fire had taken place?—Witness: Yes.

Witness, proceeding, said he had not the slightest hesitation on the morning of the fire in running close up to the refinery. He was within ten yards when the explosion took place, and he certainly should not have gone into that position if he had imagined it was likely to explode. Witness said that the oxygen generated from the chlorate by the fire and the carbon from the burning wood was the most probable cause of the explosion.

In reply to Mr. Stewart Brown, witness said neither the United Alkali Company nor the Home Office took the view that chlorate was explosive. The works were not certified or licensed. They made vitriol, saltcake, and bleaching powder as well as chlorate of potash, which was chiefly manufactured for matches, and to a smaller extent for fireworks. He did not know of fires having been caused in railway trucks by friction applied to these casks. He did not know that the Dock Board and railway companies refused to carry chlorate of potash in wooden kegs.

Mr. Stewart Brown said that it seemed to him that the witness's explanation as to the possibility of setting chlorate on fire was somewhat inconsistent with the first witness's statement as to the origin of the explosion.

Witness: I didn't say that it was difficult to explode a mixture of chlorate of potash and wood.

Mr. Stewart Brown: How do you suggest the sparks set the whole of the place on fire? Well, if you drop a match on chlorate of potash and sawdust together you would get a rapid fire

Then it is your opinion that the spark fell on the wooden side of the tank, and set the whole of the place on fire? - Yes.

Examined by Mr. Riley: When he first saw the smoke, he concluded that it was the refinery which was on fire. The man who was with him remarked, "It is probably the smoke from the locomotive." Part of the building was built on a bank which had originally been an old sulphur bank. It was quite true that sulphur and chlorate were sympathetic explosives. A man tramping in and out of the place would probably take into the chlorate house some sulphur residue, but there would be no development because the floor of the place was never dry except when work was interrupted. He had never suggested the roofing of the building with galvanised iron—even in face of the possibilities of a fire happening from various causes. In regard to the water supply there was the possibility of a fire breaking out in the chlorate house without there being any water available—for five or six minutes.

Mr. Riley: And by the time the hydrant could be used it was inaccessible to the men? No, the hydrant was not inaccessible—only the building was too far gone.

Witness, continuing, said that the foreman cooper at the central cooperage said he had to determine whether these casks had to be used again. The wood used for the casks was now superior to that previously used.

The Foreman of Jury asked if the wood of the chlorate vats, being saturated with potash, and subject to a violent scratching with a keg—whether the wood could cause an explosion?

Witness said he would not say it would be impossible to create a spark by this means.

ONE FIRE IN TEN YEARS.

By the Jury: During the last ten years there had only been one fire at the works. He thought Mr. Faram had turned to run away because of the excessive heat, which was becoming greater every moment.

Mr. Rudge, at the conclusion of his evidence, was complimented by the coroner on the straightforward manner in which it had been given.

Witness said he had only followed his instructions; they had nothing to hide.

The Coroner: You have told us all you know, and we appreciate it.

Dr. Thompson Best was the next witness. He said he was a doctor of physics, and had been chemist and manager of the Hardshaw Brook Works since 1892. The Hardshaw Brook Works adjoined Kurtz's works. On the morning of the accident he was standing on the boundary between the two works, when he saw a large volume of smoke issuing from Kurtz's chlorate factory. He ran over to the works, and went right up to that portion of the refinery, outside of which he saw some men standing. He looked inside, and from what he saw considered that the fire had made too much progress to save the building. He then observed some men dressed in blue flannel clothes, and, knowing them to be in danger of their lives, told them to run away out of danger. The sparks were then coming through the roof. Witness told his foreman to provide the men with additional hose pipes from the the Hardshaw Works. He then went to the door of the storeroom and looked in. He could not see much—the whole place was full of smoke. About that time the roof of the storehouse got on fire, and the tops of the casks got on fire, and then the heat became so intense that they had to keep backing away. Witness and several of the men had reached a distance of from thirty to forty yards, when he looked round and saw the explosion. Witness was immediately thrown to the ground, but afterwards went back to the scene, and gave instructions to search for two men. Witness was familiar with chlorate of potash, and he had no idea that any explosion would have occurred. He had looked into the storeroom (about five yards from where the explosion took place) within a minute before the explosion.

In reply to the coroner, witness said iron was decidedly the safer material for tanks. He did not think there was anything unreasonable in the way the empty barrels were rolled. As to the storage of the chlorate, he did not think it wise, in the light of the accident, to have the tanks in proximity to the chlorate house, the crystallising and the drying rooms. If they had not been so close, no explosion would have occurred. There would simply have been a fire.

By the Coroner: He considered it unadvisable now to store so much chlorate together. Previously he would not have thought so.

Re-examined by Mr. Horridge: He never knew that chlorate of potash possessed any explosive properties whatever.

John Parry, foreman cooper in the machine shop at the central cooperage, said he received the casks that came from Byrant and May's, and it was his duty to examine the casks as they came back, to see if they were clean or wanted mending. He always made a close external examination of the casks, and never noticed any chlorate attached. The examination was purely external.

John M'Cooey and Matthew Brady, coopers, were called to trace the casks from the central cooperage to Kurtz's. M'Cooey said he examined the casks for phosphorus, by order of Mr. Lucas, but he never found any.

Mr. Parry, recalled, said he never received instructions to look for phosphorus on the casks.

John Lucas, manager to the central cooperage, said he had never told any of the men to look for phosphorus on the casks. He told them to examine the casks to see that they were perfectly clean, well coopered, and fit for repacking. He never thought there was any necessity for looking for phosphorus.

Mr. Horridge said that was the whole of the evidence he proposed to call.

The Coroner said that if there was any witness that Mr. Stewart-Brown or anyone wanted to hear, he would take care that they were called.

Brady, examined by Mr. Stewart-Brown, said he saw the fire in the crystallising house after Bates gave the alarm. It was running along the bottom of the crystallisers. When they filled the kegs with chlorate they were first lined with blue paper.

After the adjournment, Mr. T. W. Stuart, general technical manager for the United Alkali Company, was called by Mr. Horridge, who said that he would answer any questions the court might care to ask. He had nothing on which he wanted to examine him.

Colonel Ford: Have any casks returned from Bryant and May's previous to the present occasion been found to have phosphorus adherent?—Not to my knowledge.

Or match composition?—Not to my knowledge.

The Coroner: Dr. Best and yourself had an interview with Colonel Ford, Her Majesty's inspector, when he visited the premises?—We were with him constantly.

Did you say to the inspector that the casks which came back from Bryant and May's were examined in the cooperage?—Yes.

Did you go further and say that some had been found to have small portions of red match composition adherent to them?—I do not remember saying that.

Did either you or Dr. Best say so?—I don't remember saying it myself or Dr. Best saying so.

Mr. Stewart-Brown: I suppose if such a thing had occurred it would have been reported to you?—Well, not necessarily to me. It might have been reported to the superior of the men who discovered it.

Had such a thing as phosphorus adhering to these casks ever been discussed or contemplated until this inquiry?—Not to my knowledge. To my knowledge the chance of phosphorus being on the casks has never been raised before.

Mr. Griffin, a juryman, said he thought Mr. Stuart when the jury visited the works gave them the presence of phosphorus as a possible explanation as to how the thing originated.

Mr. Stuart said he was asked the question as to what were the possible causes, and he said that if some phosphorus had been on the casks it was possible that by friction a spark might have been struck out in the way that Bates described.

Mr. Griffin: Would you say that it is safer for this chlorate to be packed in iron drums rather than wooden casks?

Mr. Stuart: Since this disastrous explosion occurred, I have no hesitation in saying that it would be safer.

Mr. Richmond said there was little he need say. He thought, in view of the tendency to fire that there was in chlorate works, that all vessels made of wood should be done away with as far as possible, and in view of the explosion the chlorate should be kept further from the manufacturing department.

Colonel Ford said he had nothing further to add to Mr. Richmond's remarks, except to say that he had not concluded his inquiry, and he would go into the matter as deeply as possible.

Mr. Burt, another juryman, asked what Colonel Ford meant by further inquiry. Did he intend holding a further public inquiry?

Colonel Ford: No. I have to make experiments in order to find out if possible what was the cause of the explosion, apart from the fire.

The Foreman (Mr. Moss Greer) asked if they could know whether the casks, when they went to Bryant and May's, were taken anywhere near the place where they made the mixture for the matches.

Colonel Ford said that was part of his inquiry that he was going to make.

Mr. Burt: There is no representative from Bryant and May's here?

The Coroner: No. We are not able to go beyond this.

CORONER'S SUMMING UP.

The Coroner then thanked the jury for the attention they had given the case. It was very important that when a disaster of this kind took place in such a large manufacturing district as that of St. Helens the cause of the disaster should be fully and carefully gone into by the jury, and if possible not only the cause discovered, but any lessons that were to be learned from the disaster should be embodied in the presentment of the jury. The matter was very simple so far as the jury's duties were concerned. Their duty was to find out whether any person was criminally responsible for the death that had taken place. The question of civil responsibility as to whether the owners of the works would have to pay any money for the losses that had been sustained was outside their jurisdiction. First of all they must start with the fact, which would have to be admitted by everyone, that outside the question of explosion there had always been in these works the danger of a fire. They had continually, from time to time, to make inquiries in St. Helens into the deaths of persons who had been set on fire in consequence of their clothing becoming impregnated with chlorate of potash. Perhaps it was quite true that by itself it might burn away without doing any harm, but that when it became impregnated with something else, like the clothing of an individual or the wood surrounding these settling tanks, then there was a danger of fire. The matter resolved itself into a very small compass, because all the witnesses admitted that if there had not been adjacent to these rooms where the process was going on a room called the storeroom—where such a large quantity of chlorate of potash had been stored—there would not have been an explosion, nor possibly any danger to life. If it had been stored apart, although there might have been a fire just as there had been in this particular instance, the subsequent danger would have been avoided, and loss of life perhaps also avoided. Then it seemed quite clear that the crystallising vats where the fire originated, were made of wood and lined with lead. This wood was the only material that could have become ignited, and perhaps the fire would not have originated if the tanks had been made entirely of iron. If the jury made any suggestions they should not be made in the sense of blame. They ought not to do anything that would harass the industry that was going on in their midst, and which was a very useful industry, not only for those who used the articles produced, and not only for the capitalists whose money was invested, but for the labourers who get their wages from it. They must look at the case in a fair judicious frame of mind. It seemed quite clear that these works were carried on like works of a similar kind, and there was no evidence to show that the United Alkali Company had tried to carry on other works in any better manner than these.

RECOMMENDATIONS OF THE JURY.

The jury, after an absence of half an hour, returned a verdict of "Accidental death," and recommended, firstly, that all buildings of chlorate plant should be fire proof; secondly, that all packages should be fireproof; thirdly, that cooling tanks should be made of iron instead of wood; fourthly, that better precautions should be taken for dealing with outbreaks of fire; fifthly, that the amount of stock in any building be limited by Government control, and such building be fireproof and isolated from the process of manufacture.

Reports of Companies.

BRUNNER, MOND AND CO., LTD.

The thirty-fourth ordinary general meeting of the shareholders of Brunner, Mond and Co., Limited, Winnington, Northwich, was held on Tuesday, at the Law Association-rooms, 14, Cook-street, under the presidency of Sir John T. Brunner, Bart., M.P. There was a large attendance of shareholders. The balance-sheet showed a balance to the credit of profit and loss account on the working of the year ended the 31st March, 1899, of £368,623. 9s. 3d., which with the amount of £81,012. 5s. 3d., brought forward, made a total of £449,635. 14s. 6d. The chairman said the report and balance-sheet were very satisfactory. They were carrying forward £30,000. more than they did a year ago, in spite of the fact that they were paying 5 per cent. per annum more. He could congratulate them upon the fact that they had so soon been able to recover from the heavy blow under which they suffered as the result of the practical loss of the American trade. The duties in America were raised in August of 1897, and now on the 31st March, 1899, they had recovered from the blow inflicted upon them by that. They were year by year making their business more complicated, which was the most interesting one he had ever heard of. Their stocks were some fourteen thousand pounds less, which was rather a wholesome condition of things than otherwise. The debts owing were practically the same as they were, and the cash in hand was £43,000. more. They would therefore see that as long as this state of affairs continued to exist the directors would not be calling upon them for any further sums upon either class of shares now only partly paid. It would be quite out of the question to do this so long as they had such an enormous amount of money in the bank at the end of the year. The balance on profit and loss account was £78,000. more than it was last year. The collection of debts, he considered, had been managed in an admirable manner, and only the small item of £227. 2s. 1d. appeared under the head of doubtful debts. He then moved the adoption of the directors' report and statement of accounts and that the following dividends for the year ended March 31st, 1899, be paid to the holders of shares issued on that date, viz., to the holders of preference shares at the rate of 7 per cent. per annum on the amount paid up on such shares, and to the holders of ordinary shares at the rate of 30 per cent. per annum on the amount paid up on such shares, free from income-tax, less the interim dividend in each case paid on the 6th December last.

This was seconded by Mr. C. M. Holland, and carried unanimously. On the motion of Mr. G. Jones, seconded by Mr. Coghill, it was resolved that the directors, other than the managing directors, be paid the sum of £1,200. for their services during the year.—On the motion of Mr. Holland, seconded by Mr. A. Mond, the five retiring directors were re-elected. Messrs. T. W. Read & Co., chartered accountants, of Liverpool, were appointed auditors for the year ending 31st March, 1900, and it was resolved to pay them the sum of £650. for auditing the accounts. On the proposition of the chairman, a hearty vote of

thanks was accorded to the staffs at the company's various works for the excellent work they had done during the past twelve months.

An extraordinary general meeting was subsequently held, when the following resolution was, on the motion of the chairman, seconded by Dr. Hewitt, passed:—"That each of the existing £10 ordinary shares be divided into ten £1. shares, and so that as regards those shares which are not fully paid up the proportion between the amount which is paid and the amount which is unpaid on each share of reduced amount shall be the same as it is in the case of the existing share from which the share of reduced amount is derived."

CASTNER-KELLNER ALKALI CO., LTD

THE RECENT LAW SUIT.

Mr. William Mather, chairman, presided over the third annual general meeting of the shareholders of this company on Tuesday afternoon, at the Cannon-street Hotel, London, and, in moving the adoption of the report, said the four installations undertaken on the formation of the company were now at work, the last thousand horse-power plant having come into operation towards the close of March. During the year the four installations had therefore been at work, though for different periods—the first for the whole time, the second for the greater part of the year, the third for a shorter part of the time, and the last installation for a shorter period just before the expiration of the financial year. The profit accruing from the working—which, of course, involved the expenditure of the whole of their capital—was not derived from the maximum output for which they had built the works, but it was a satisfactory return, according to the figures submitted. In his opinion the working of the four installations during the present year, beginning at the end of last March, would show what the process was capable of doing under the circumstances which might prevail during the ensuing year. The directors were

MORE THAN SATISFIED

with the success of the process, and he might say that their process did not depend for its success wholly upon the terms of the claims of the patents that they held. During the last three years experience had been gained, and improvements made which were not patentable, but which were of great value to them, and they would derive benefits from them in the time to come. It was not necessary to explain to their would-be competitors how it was that they valued their experience almost as much as their patents, but it was not an unusual result with all new discoveries that after they had been secured as far as might be by a process of law in the shape of the patent rights, there were other developments of which the world knew nothing, but upon which much of the success of the discovery ultimately depended. That was their experience and their case.

THEIR CONTRACT SALES.

It might be thought that they had been working under favourable conditions during the last two years, and that, notwithstanding that all their plant had not been at work, they had had a favourable contract for the sale of part of their products, and that this contract would expire after a lapse of another year. Speaking for himself, it did not concern him very much whether the contract continued or not. It was on the cards that they might have further contracts in one way or another, but he did not think that the absence of such a contract would make a very serious difference in their position. The contract affected the disposal of a part only of their product. The remainder had been sold at fluctuating prices—he regretted to say at diminishing prices, which were probably lower than had been reached in the open market for some time. He was personally satisfied that notwithstanding the present low prices of caustic soda and bleaching powder—enormously lower as they were than when they started their enterprise—they would be able with the experience they had gained and were gaining, and with their process, to make a very fair return on the capital of the company if they had no contract at all, but stood their chance in the open market. Mention was made in the report of the law suit they had had with one of their competitors. A pioneer company, as he once said, had many battles to fight to retain for themselves the ground that they covered. That had been their experience, and though lawsuits were vexatious and expensive, they were not much concerned with

THE ISSUE OF THE RECENT CASE

against another company, which they held had infringed their patents. A most elaborate judgment was given in their favour in the first Court, and that had been reversed in the Court of Appeal. They were advised, however, by the most eminent and experienced counsel that they should appeal to the House of Lords to have the matter finally decided. The dispute had reference to a patent which they had not had need to work, but which they regarded as one of the outer bulwarks of their position. It was not the fortress or the citadel itself, as it were, but an outwork, but they had thought it right to defend their position in the interests of the shareholders. They hoped that there was a full year's work before them with the maximum output, and whatever the market price might be, the result must be a fair profit to the shareholders. The developments of electrolytic chemistry, and especially in connection with the alkali trade, though they threatened to be very numerous during the past few years, had not yet resulted in any large commercial enterprise. They had had the start in the line of manufacture, and were able to manufacture at a lower price than by any other process known to science. Thus they were in the position that, were the ordinary manufacturer to sell at actual cost price, the Castner-Kellner Company would still make a considerable profit. A very slight improvement in the market price of to-day would give a very large profit on the capital employed. (Applause). In conclusion, he explained the reasons influencing the directors in asking for power to convert an issue of £100,000. 5 per cent. three year debentures into one for £150,000. at a lower rate of interest. stating that it was advisable to have the capital at command in order, if necessary, to take prompt advantage of new discoveries that they might make or that might be communicated to them by their allies in Germany or America. It was quite possible that such discoveries would be made within the present year, enabling them to largely develop their production from the present plant without any large extra expenditure.

Sir Henry E Roscoe seconded, and expressed a belief that they had a very satisfactory outlook for the future. Their works might be considered as model works in every respect. Chemical works were generally a nuisance to the neighbourhood, but with their process there were no noxious fumes whatever.

The report was adopted.

A dividend of 8 per cent. per annum for the six months ended March, making 8 per cent. for the year, was agreed to, and the proceedings terminated with a vote of thanks to the chairman.

J. C. & J. FIELD, LTD.

The profits made during the year, after providing for repairs and depreciation of plant and machinery, amount to £23,758. 4s. 9d. Deducting from this amount interest paid and accrued on the debentures, income-tax, managing director's salary, directors, trustees, and auditors' fees, and expenses of secretary's department, there remains a net profit of £18,689. 9s. 4d., to which has to be added £1,413 18s. 8d. brought forward from the last account, making a disposable balance of £20,103. 8s. Out of this sum the board recommends:—Payment of the dividends on the seven per cent. preference shares, and on the six per cent. preference shares. Payment of a dividend of five per cent. and one per cent. bonus on the ordinary shares, free of income-tax. Placing £7,000. to reserve fund. Carrying forward £1,730. 1s. 4d. to next account. Owing to want of space for manufacturing purposes, the directors have found it necessary to put in hand the completion of the building fronting on Upper Marsh, Lambeth. The question of a reorganisation of the capital of the company, which was referred to at the last general meeting, has been continuously before the directors during the year. They have not found it possible to complete the arrangements in time for the present meeting, but they expect to be in a position to submit their proposals to the shareholders at an early date.

DIVIDENDS.

LAUTARO NITRATE COMPANY.—The board recommend a final dividend for the year 1898 of 1s. 6d. per share.

CAPE COPPER COMPANY, LIMITED.—An interim dividend of 5s. per share has been declared on the cumulative preference and ordinary shares.

NAMAQUA COPPER.—The directors, in their report, propose the payment of a balance dividend for 1898 of 16¼ per cent, which, with the interim dividend of 6¼ per cent. paid in December last, will make the total dividend for 1898 22½ per cent.

ANSWERS TO CORRESPONDENTS.

ACETATE (Breconshire).—We thought we always gave particulars of the shipments of acetates. To give the actual weights is sometimes impossible, but we are giving special attention to the matter, for a time, to see if by any chance we can augment our present returns.

T.M.C.—We are sending you particulars. It would be a suitable material we should think.

THE RESIN MARKET.—There has been a slight decline in the prices of "pales" recently, with little business resulting. It is predicted that the decline will be temporary, as a reduced crop is probable. Mediums and commons have remained steady at the low prices quoted. The London market is practically unaltered, with the exception of a decline in "pales" on the spot, owing to the scarcity having been relieved by fresh arrivals. In Liverpool a decline in the value of low grades, owing to the enormous stocks, is recorded, and some large sales have resulted. These clearances, with an advance in steamer freight rates, have induced a better tone. "Pales" continue firm at ruling prices, though there have been one or two cheap offers of small lots for steamer shipment; but several buyers are willing to take up all such offers.

Trade Notes.

Manchester Sewage—Corporation Fined.—At the conclusion of the ordinary business in the County Police Court on Tuesday, Mr. J. M. Yates, Q.C., stipendiary magistrate, and other magistrates sat to hear the case between the Mersey and Irwell Joint Committee and the Manchester Corporation, arising out of a conviction for pollution of the Irwell and the Ship Canal by the Manchester Corporation. Mr. Sutton called three witnesses, who gave evidence as to samples of sewage from the Corporation works being taken and analysed. It was stated that the works were in practically the same condition now as they were in 1896. Mr. Balfour Browne defended for the Corporation, and the Lord Mayor went in the witness box to give evidence. The bench retired and on their return the Stipendiary said that taking into consideration the evidence of the Lord Mayor they had decided to inflict only a small penalty. The Rivers Committee had had a difficult task and they had not had the support of the Corporation as they should have had. Manchester was the leading town in Lancashire, and in the water-shed they should set an example. Five days were complained about, and there would be a fine of £10. and costs for each day. In reply to Mr. Balfour Browne the Stipendiary said he would be glad to grant leave of appeal if the Corporation desired it.

A Sulphur Steamer on Fire.—The Marseilles steamer "Alesia," from Palermo, with 233 passengers on board for New Orleans, has arrived at Algiers with her cargo of sulphur on fire.

Strike at a Canadian Carbide Works.—The furnace and other workmen employed at the Calcium Carbide Works belonging to the St. Catharine's Carbide Co., Ltd., at Merritton, Ont., and of which Thomas L. Wilson, patentee of the process, is manager, have come out on strike, the result being that the works, consisting of six furnaces, had to shut down instantly.

United States Tariff and Welsh Coal.—The Board of Trade have received information, through the Foreign Office, from Her Majesty's Consul General at San Francisco respecting a decision of the United States Circuit Court, which has the effect of entirely removing anthracite coal from the list of free imports, on which it was placed in 1870. By the United States Tariff Act of July, 1897, a duty of 67 cents per ton was imposed on all foreign coal containing less than 92 per cent. of fixed carbon, which is stated to be just above the standard of Welsh anthracite. An importer at San Francisco who had received a shipment of coal from Swansea was recently called upon by the collector of Customs to pay duty on it, and, having paid under protest, he appealed to the Board of General Appraisers in New York. The Board sustained the collector's demand, and their decision in turn was upheld by the judge of the Circuit Court on the admission of the appellant that the coal contained less free carbon than is required by the law.

Market Reports.

TAR AND AMMONIA PRODUCTS.

The position of benzols is truly depressing; this article being hopelessly weak, with 90's at 6¾d. to 7d. and 50/90's 7¼d. There is not much doing in carbolic acids, and prices remain as last quoted. Naphthas are dull, particularly solvent, which is at a price unknown for a long time. Creosote is scarce, and so maintains its price. Anthracene values are purely nominal, there being nothing doing. Pitch keeps steady at 27s. 6d., f.o.b. East Coast, and 24s. 6d. West Coast.

Sulphate of ammonia is easier. Forward business is quiet. For prompt, Beckton quotation has been withdrawn. London outside makes are quoted £12. 15s., Hull £12. 10s., and Leith £12. 15s. Nitrate of soda is steady at 8s. per cwt. for fine quality.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade works generally continue busy, and prices all round are well upheld. There are no material changes in quotations during the week. Caustic soda remains as for some time past, viz., f.o.b. Liverpool, 77%, £7. 12s. 6d.; 74%, £7. 7s. 6d; 70%, £7.; 60%, £6. nett, per ton. Alkali, 58%, soda crystals and bicarbonate are in good demand at convention rates. In bleaching powder business is still active and price unaltered at £4. 15s. to £5, hardwoods, f.o.b. Liverpool; and £4. 2s. 6d. softwoods, f.o.r. Chlorates quiet and values unchanged at 3½d. and 3¾d. for potash and soda respectively. For sulphate of copper the demand is well maintained and quotations steady at £26. 10s. f.o.b. Sulphur £4. 12s. 6d. f.o.r., and firm thereat. Saltcake slightly easier on the spot, but there are more inquiries for forward. Nitrate of soda, 7s. 7½d. to 7s. 9d. per cwt. Borax crystals, £16. per ton. American brown acetate of lime is firm at £4. 17s. 6d. net, ex wharf. Grey, £7. 15s per ton. There is only a moderate inquiry for acetate of soda at £12. 15s. to £13. per ton. Acetic acids unchanged. Yellow prussiate of potash continues in good request and price firm at 8¼d per lb. Soda 6½d. per lb. Values of sulphocyanides still rule low. Muriate of ammonia has further advanced to £22. 10s., though only nominal. Other ammonia salts a m. White powdered arsenic is much reduced in supply, and price maintained at £19. for best brands. In aniline oil and salt values are without any alteration. Carbolic acids are somewhat dull. The demand for chemicals in the textile trades is generally quiet.

REPORT ON MANURE MATERIAL.

Now that the close of the manure season is rapidly approaching, manufacturers are resuming their interest in the purchase of mineral phosphates in the forward position. There is nothing fresh to report in 77/80 % Florida rock for 1900 shipment, but shippers are very firm at the equivalent of about 9d. per unit, delivered good U K. ports. Tennessee rock, 78/80%, may be had for this, or next year's shipment at 7¼d. to 7½d. per unit. South Carolina rock is quoted 6½d. to 6¾d per unit to U K. ports, and the quotation for 58/63% Algerian has been advanced to 7d. per unit for 1900 shipment. There is large inquiry for East Indian bone meal, Summer/Autumn shipment, and about £5. per ton would have to be paid to induce business. On spot supplies are very limited, and sellers require £5. 3s. 9d. to £5 5s. per ton, ex store. Nitrate of soda is quiet at 7s. 10½d. to 8s. per cwt. for good up to refined quality. There nothing special to report in miscellaneous material.

THE METAL MARKETS

LONDON, Wednesday.—Pig iron active: Scotch Warrants closed at 64s. 11d., Middlesbrough, 59s. 6d., cash, and hematite, 69s. 3½d. Copper quiet: Chili bars, G.O B.'s and G.M.B. s, closed at £76. 12s. 6d. to £76. 17s. 6d. cash; £76. 5s. to £76. 10s. three months. Tin dull: Straits closed at £117. 16s. 3d. to £118. 6s. 3d. cash, and £118. 10s. to £119 three months. Lead firm: Spanish, £14. 3s. 9d.; English, £14 7s. 6d. Silesian spelter, ordinary, £28. 10s. to £28. 12s. 6d. Nickel, 1s. 2½d. Antimony, £39. 10s. Quicksilver: first hands, £8. 2s. 6d.; second hands, £8. 2s. *Copper Shares* steady: Cape, 4⅝ to 4¾; Copiapo, 3 7/16 to 3 9/16; Libiola, 1⅞ to 2⅛. Mason and Barry, 3⅞ to 4⅛; Rio Tinto, 48⅝ to 48¾; Tharsis, 8⅛ to 8¼.

GLASGOW, Wednesday.—Market strong; good business. Scotch done at 64s. 9d., 65s. 1½d., and 65s. cash; also at 65s and 65s. 1d. month; buyers, 65s. cash; sellers 65s. 0½d. Cleveland done at 59s. 5d. and 59s 9d. cash; also at 59s. 7d. and 60s. month; buyers, 59s. 6d. cash; sellers, 59s. 7d. Cumberland hematite done at 69s. 2½d, 69s. 4½d, and 69s. 4d. cash; also at 69s. 5d, 69s. 7½d., and 69s. 7d. month; buyers, 69s. 3½d. cash; sellers 1d. more. Middlesbrough hematite done at 68s. 3d. month.

LIVERPOOL OIL AND COLOUR MARKET.

Wednesday.

OILS.—Palm oil keeps very firm and prices are inclined to favour sellers. The inquiry is good, but offerings are limited. Olive is quieter, with only a moderate demand, but values are unchanged. Linseed is firmly held at 20s. 3d. to 20s. 6d. cwt. for Liverpool makes in export casks. Cottonseed is still quoted 17s. to 17s. 6d. for Liverpool refined. Castor oil is quiet for all descriptions on spot. Good seconds Calcutta is offered at 2 13/16d. to 2⅞d.; first pressure French, 2⅝d. to 2¾d.; and Madras, 2¾d. per lb., but buyers are shy. Tallow is firm and sellers seem in no way disposed to force business. Resin is in fairly good demand on spot and prices are well maintained. Spirits of turpentine is easier owing to arrivals, and a fairly good business is now being done at 35s. 6d. cwt. Petroleum is firm, with American 6¼d. to 7½d., and Russian refined, 5⅝d. to 6d. per gallon.

CAKES.—The more genial weather of the past few days has curtailed the demand, but values are quite steady for most descriptions. American Western linseed on the spot are firm and the turn dearer at £6. to £6. 7s 6d, with a moderate inquiry going on, and Liverpool makes are held for £7. 5s. to £8. per ton, according to brand, though transactions are only on a moderate scale. In other imported descriptions Bombay are quoted 5s. easier at £6. 15s. to £7., with moderate sales making thereat, whilst Russian are without material alteration at £7. 5s. per ton, with only a poor inquiry thereat. Good to choice

rands of American decorticated cottonseed are well held for former ates, with a moderate consumptive inquiry experienced, and the quotation is still given at £5 12s. 6d. to £6. 2s. 6d., according to quality; Liverpool makes have only a quiet sale, but sellers are steady in their requirements at £6. 2s. 6d. to £6. 15s. per ton, according to brand. Home crushers still quote £4. 15s. to £5. 5s., according to brand, for Liverpool undecorticated makes, but there is only a moderate consumptive business passing on this basis, whilst Egyptian have a firm market and meet a fair amount of inquiry at £4 10s to £4. 12s. 6d. per ton, according to quality.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—Linseed oil continues an improving market, and cotton oil is practically unchanged; if anything the market rules easier. The exports of oil for the week has been:—Linseed oil, 1 ton Belgium, 1 Denmark, 15 Germany, 5 Holland, 19 Norway and 2 Turkey; total 43 tons. Refined cotton oil: 8 tons Belgium, 14 France, 25 Germany, 34 Holland and 4 Norway; total, 85 tons. Linseed oil in sympathy with seed has advanced; the market value on the week has increased 15s. per ton, the present rates being—Linseed oil, 18s 6d. paid, spot, naked, 17s. 9d. June/August, 16s. 10½d. September/December. Refined and boiled, £1. to £1. 10s. per ton extra. Refined cotton oil quiet at 15s. 6d. spot naked, 15s. 7½d. to 15s. 9d. June/August. Barrels, £1. 10s., and ordinary casks £1 per ton extra, whilst crude ditto is quoted 14s. 4½d. naked, spot. Castor oil, extracted here, cold drawn, pharmaceutical, in barrels, 28s. 6d. per cwt; in cases 3⅞d. per lb. Pure firsts, in barrels, 26s. per cwt; in cases, 3⅛d. per lb. Seconds, 25s. per cwt. in barrels; in cases, 2⅞d. per lb. Olive oil from £32. per tun, according to origin. Olive oil soap, to arrive, £16. to £18 per ton. Arachide nut oil, 26s. per cwt. Oleines unchanged, £18. 10s to £21. per ton. Cod oil, £16 to £18. per ton. Resins unchanged. Turpentine, 34s. 9d. to 35s. per cwt. Colza oils unchanged.

CAKES.—The movements of the American syndicate have been replaced by others of an English syndicate for the same purpose, viz, the amalgamation of the seed, oil, and cake producing industry. Linseed cakes are firm, yet quiet, 95% pure being quoted £7. to £7. 2s. 6d.; oilcakes (linseed), £6. to £6. 2s. 6d.; Russians, £6. 15s. to £7. Cotton cakes firmer; best makes, £5. 2s. 6d. to £5. 5s.; seconds, £4. 17s. 6d. to £5; decorticated, £6. 5s.; meal, £6. Rape cakes, £4. per ton.

PAINTS.—All is not gold that glitters in this trade. Some firms are grumbling over their net profit realised, although gross profits in many instances appears satisfactory. Ordinary colours in oil from £10. per ton. Dry colours (mineral), from £4. upwards Black varnish, £5. in barrels. Disinfecting fluid, 10d. per gallon.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

Last week, soon after despatch of this weekly report, sulphate of ammonia (Leith f.o.b.) went in for a stronger running than ever, if we do not go back so far for comparison as the good years 1893-1894. Makers' demands went up with a bound, and, after a very short period of hesitation, buyers found themselves paying £13. for prompt delivery. This price has since been maintained, and possibly it may be improved upon. With this exception there are hardly any changes in the market, which runs steadily and with rather more of inquiry for the home supplies, but without any increase of values. Copper and lead chemical products are still firm. Mineral oils and paraffins continue as before.

Chief prices current are:—Soda crystals, £2. 5s. to £2. 7s. 6d. basis nett, Tyne; soda ash, £4. 2s. 6d. to £4 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 5s. to £4. 15s. nett, Glasgow; caustic soda, white, 74° £7. 7s. 6d, 70/72° £7., 60/62° £6., and cream 60/62° £6., all nett, Liverpool; bleaching powder, 35/37°, £5. 5s. to £5. 10s. nett, Tyne; saltcake, 27/6; borax, English refined, £16., and boracic acid, £26. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s., nett, Liverpool; bichromate of potash, 3½d., less 6% for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d., less 6% for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow); chlorate of potash, 3⅝d, less 5% Liverpool; nitrate of soda, 8s.3d.; sulphate of ammonia, £13. prompt, f.o.b. Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £26. 10s, less 5% Liverpool; paraffin scale, hard, 1⅞d. to 2d. per lb., and soft 2d. per lb.; paraffin wax, 120° semi-refined, 2¼d. to 2½d. per lb.; paraffin spirit (naphtha), 9d. to 9½d. per gal; paraffin oil (burning), No. 1, 6¼d.; and crystal, 6¾d., at Glasgow and other big centres, for Scotch buyers (English sales a shade lower); ditto (lubricating) 865° £4. 15s. to £5. 5s., 885° £5. 10s. to £6., and 890/895° £6. 5s. to £6. 10s. Week's imports of sugar at Greenock were 800 hhds., 445 barrels, and 7,882 bags, beet, unrefined.

TYNE CHEMICAL REPORT.

TUESDAY.

The chemical trade is fairly steady. .d there continues to be a good demand for home consumption. Bleaching powder is quoted at £5. 5s. to £5. 10s. per ton. Caustic, 76/77%, £8., and 70%, £7. per ton. Soda crystals, £2. 12s. 6d. per ton gross weight locally. Sulphur steady at £4. 15s. per ton.

Bleaching powder, softs, £5. 5s. per ton, nett; do., hards, £5. 10s. per ton, nett; caustic soda: 76/77% £8., and 70% £7. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do, 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75°Tw., £2. 12s. 6d. per ton, nett; do., 100°Tw., £3. per ton, nett; do., 140°Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. od. per ton, nett; blanc fixe, £6. 10s. per ton nett; chloride of barium, refined crystals, £6. 15s. od. per ton, nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt unchanged, price steady at 9s. 6d. per ton, f.o.b. Tees.

COALS.—In the coal trade, business is steady, and prices are generally well maintained. Coke continues in very strong demand, and is firm at 25s. per ton, f.o.b. To-day's quotations are:—Best Northumbrian steam, 12s. to 12s. 3d. per ton; second qualities, 11s. to 11s. 3d. per ton; small steam, 6s. 6d. to 7s. per ton; bunker coals, 9s. 6d. to 10s. per ton; household coals, 11s. to 12s. per ton; coke, 25s. per ton.

New Companies.

Flexoid Synd., Ltd.—CAPITAL £2,000. in £1. shares. This company has been formed to acquire rights relating to the manufacture of flexoid, and to carry on the business of analytical, pharmaceutical, photographic or manufacturing chemists. Registered without articles of association. Registered office, Worsley Mills, Worsley-street, Hulme, Manchester.

Reckitts, Ltd.—CAPITAL £1,700,000. in £10 shares (50,000 4½ per cent. cum. pref.). This company has been formed to acquire the undertaking of Reckitt & Sons, Ltd., to enter an agreement with T. H. Ferens, and to manufacture, sell and deal in starch colours, washing blue, black lead, emery paper, groats, mustard, etc. The subscribers to the memorandum of association are:—F. Reckitt, J.P., Caen Wood Towers, Highgate; J. Reckitt, bart., Swanland Manor, E. Yorks; F. J. Reckitt, Wood Grange, Hull, gentleman; T. R. Ferens, J.P., Saxby House, Holderness-road, Hull; H. J. Reckitt, M.P., Winstead, Hull; W. Linney, 14, Westcott-street, Hull, manager; H. Lamb, 52, Sherburn-street, Hull, secretary.

Copper Company of British Columbia, Ltd.—CAPITAL £100,000. in £1. shares. This company has been formed to acquire, develop and turn to account the Lancaster, Simcoe and Toronto Fraction Copper mines, in the district of East Kootenay, B.C, and to adopt an agreement with P. H. Stevens. The subscribers to the memorandum of association are:—W. R. Ockerby, 49, Queen Victoria-street, E.C., manager; H. G. Pulham, 4, Denholme-road, W., clerk; P. H. Lonergan, 9 and 10, King-street, Cheapside, writer; J. T. Rockett, 14, Westbury-road, Bowes Park, N., accountant; F. R. Russell, 207, Byron Avenue, East Ham, E., clerk; R. M. Hewett, Roden Lodge, Barking, E., merchant; J. H. Bodell, 49, Fawcett-road, S.E., clerk.

Hughes, Frommer, & Co., Ltd.—CAPITAL £60,000. in £1. shares. This company has been formed to adopt an agreement with Frommer & Co., Ltd., and to carry on the business of engineers, ironfounders, oil refiners, chemists, chemical manufacturers, miners, etc. The subscribers to the memorandum of association are:—A. J. Greenop, 15, Victoria-street, S.W., solicitor; E. L. Clapson, 2, Army and Navy Mansions, Westminster, secretary; H. Taperell, 2, Minster-road, St. Ann's-road, N., clerk; H. O. Sutherin, 36, Throgmorton-street, E.C., printer; H. V. Simpson, 2, Army and Navy Mansions, Westminster, gentleman; C. J. F. Scott, 33, Russell Chambers, Bury-street, W.C., gentleman; O. H. Merrick, 2, Army and Navy Mansions, Westminster, clerk.

Petrowsk Russian Oil Synd., Ltd.—CAPITAL £20,000. in £1. shares. This company has been formed to adopt an agreement with

W. J. Olympieff and F. W. Garbutt, to acquire any concessions relating to oil bearing lands in Russia or elsewhere, and to deal in and refine petroleum and other mineral oils and the products thereof. The subscribers to the memorandum of association are :—F. W. Jamieson, 9, Mincing Lane, E.C., merchant ; C. F. Howell, 10, Throgmorton Avenue, E.C., gentleman ; J. J. Darby, Green Heys, S. Woodford, merchant ; S. A. E. Hickson, 23, Rood Lane, E.C., tea broker ; C. L. P. White, 9, Mincing Lane, E.C., merchant ; R. Newman, 9, Mincing Lane, E.C., clerk ; H. R. Brownrigg, 9, Mincing Lane, E.C , clerk.

IMPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.

Week ending May 20th.

Acetate of Lime—
U. States, 879 pks. Lister & Biggs

Acetic Acid—
Holland, 10 pks. A. & M. Zimmermann
,, 50 R. W. Greeff & Co.

Alkali—
Belgium, 10 t. Leach & Co.
France, 34 Lon. & Til. Light C. & D. Co.

Alum—
Holland, 25 pks. J. White

Ammonium Muriate—
Holland, £50 H. Lorenz

Ammonium Oxalate—
Holland, 3 pks. R. W. Greeff & Co.

Ammonium Phosphate—
Holland, 33 pks. British Non-Flammable Wood Co.

Antimony Ore—
Australia, 8 t. Hallett & Fry
,, 16 Hale & Son

Arsenic—
Germany, £50 P. Jantzen
Portugal, 260 Coverley & Westray

Barium—
Germany, £54 J. Forsey

Barium Sulphate—
Belgium, 120 pks. J. L. Lyon & Co.
Germany, 49 ,,

Barytes—
Germany, 46 pks. W. Harrison & Co.
Holland, 46 ,,
,, 38 J. L. Lyon & Co.
Belgium, 147 ,,
Holland, 38 P. Jantzen
,, 94 F. Claydon & Co.

Bones—
Sydney, 57 t. Goad, Rigg & Co.
,, 8 A. B. Curtis & Co.
U. States, 3 Lunham & Moore
Natal, 8 West & Penrose

Caoutchouc—
Straits, 57 c. W. Pope & Co.
Sydney, 5 McIlwraith, McEacharn & Co.
Borneo, 60 Elkan & Co.
F. W. Africa, 3 L. & I. D. Jt. Co.
France, 8 R. & J. Henderson
Sydney, 1 H. Devitt & Co.
France, 120 H. Johnson & Sons
Zanzibar, 8 L. & I. D. Jt. Co.
Germany, 12 Butler's Wf., Ld.

Castor Oil—
E. Indies, 50 cs. Perkins & Homer
,, 100 R. G. Hall & Co.
France, 30 brls. Beresford & Co.
,, 15 Lucas & Spencer's Wf., Ld.
Belgium, 90 C. & E. Morton
Italy, 25 cs. City Coml. Wf. Co., Ld.

Caustic Potash—
Germany, 41 pks. J. M. Steel & Co.
,, 19 South Devon Wf. Co.
Belgium, 5 T. Ronaldson & Co.

Chemicals *(otherwise undescribed)*
Germany, £70 L. & I. D. Jt. Co.
U. States, 1,070 S. C. Jones
Holland, 15 Netherlands S. S. Co.
Germany, 22 R. W. Greeff & Co.
Holland, 45 T. H. Lee
Brisbane, 435 H. Hill & Sons
Belgium, 41 John Cockerill Line
,, 13 T. Ronaldson & Co.
Germany, 145 H. Lambert
Belgium, 590 T. H. Lee
Germany, 67 Butler's Wf., Ld.
,, 41 Argo S. S. Co.
,, 414 A. & M. Zimmermann
Holland, 9 J. Barber & Co.
Belgium, 24 Leach & Co.
,, 116 T. Palmer

Citrate of Lime—
Italy, 22 pks. Thames S. T. & L. Co., Ld.
,, 21 B. Jacob & Sons

Coal Products—
Pitch
Germany, 50 brls. H. Hunt
N. Russia, 18 F. & S. Chiesman & Co.
Tar
N. Russia, 238 brls. W. Beard & Son
,, 289 Linck, Moeller & Co.
,, 57 F. & S. Chiesman & Co.

Cream of Tartar—
Spain, 3 pks. B. & F. Wf. Co., Ld.
Italy, 120 B. Jacob & Sons
France, 6 C. Atkins & Nisbet
,, 15 W. C. Bacon & Co.
Holland, 20 Kirkpatrick, Barr & Co.
France, 5 B. & F. Wf. Co., Ld.

Dyestuffs—
Argols
Italy, 797 pks. B. Jacob & Sons
Cape, 12 J. R. Thompson & Co.
Spain, 390 J. Owen
Cutch
Belgium, 50 pks. L. & I. D. Jt. Co.
Extracts
Denmark, 2 pks. M. D. Co.
Canada, 275 Boutcher, Mortimore & Co.
U. States, 15 Rosenberg, Loewe & Co.
Indigo
Belgium, 1 cht. John Cockerill Line
Germany, 1 cs. L. & I. D. Jt. Co.
E. Indies, 15 chts. ,,
,, 9 Dipnall & Co.
,, 2 Parsons & Keith
,, 18 Croysdale & Co.
Saffron
Spain, 2 pks. J. Knill & Co.
Shumac
Italy, 1,000 pks. J. Kitchen, Ld.
,, 100 T. Barter & Co.
,, 800 Beresford & Co.
,, 350 J. Graves
,, 140 A. Hardrodt
,, 14 Nichs. Wvs , Ld.
Tanners' Bark
Sydney, 1 t. H. Devitt & Co.
Adelaide, 20 Deering & Robottom
,, 150 Leach & Co.
Belgium, 10 ,,
Auckland, 62 G. H. Penney & Co.
Cape, 35 Union L. Co., Ld.
Natal, 114 A. & W. Nesbitt
,, 10 Boutcher, Mortimore & Co.
,, 106 Flack, Chandler & Co.
,, 6 Bullard, King & Co.
Tumeric
E. Indies, 28 pks. H. A. Litchfield & Co.
,, 57 L. & I. D. Jt. Co.

Farina—
Germany, 50 pks. J. Knill & Co.
,, 100 Seaward Bros., Ld.
,, 100 R. Bennett & Co.

Glucose—
U. States, 1,548 pks. 9,215 c. R. G. Hall & Co.
,, 25 125 M. D. Co.
,, 50 275 C. & E. Morton
,, 250 250 Trier, Meyer & Co.
,, 50 300 Page, Son & East
,, 250 1,521 L. & Til. L. C. & D Co.
France, 400 400 L. Norman & Co., Ld.
Germany, 10 40 A. E. Piggott

Glue—
France, £12 Bennett S. S. Co.,
U. States, 25 Armour & Co.
France, 98 J. Harrison
Holland, 600 Netherlands S. S. Co.
Belgium, 28 Leach & Co.
Holland, 42 A. G. Robinson & Co.
Germany, 90 L. & I. D. Jt. Co.
,, 245 W. W. Jones & Co.
France, 1,390 T. M. Duche & Sons
,, 880 Lon. & Til. Ltge. C. & D. Co., Ld.
Germany. 85 Argo S. S. Co.
,, 68 M. D. Co.
Belgium. 1,728 G. E. Banes

Glycerine—
Germany, £25 R. W. Greeff & Co.

Guano—
G.W.Africa, 314 t. M. D. Co.
Abrolthos, 980 W. Marden
Abrolthos I. 980 Anglo-Contl. Guano Wks.

Gutta Percha—
Straits, 9 t. 15 c. Gilman Brs. & Co.
Sydney, 5 McIlwraith, McEacharn & Co.
U. States, 1 16 L. & I. D. Jt. Co.

Iron Oxide—
Germany, 3 pks. H. Lambert

Lead Acetate—
Germany, £120 F. Boehm

Manure—
E. Indies, 162 t. A. Hunter & Co.
Germany, 50 ,,

Methyl Alcohol—
U. States, 8,268 g. H. Wallace & Co

Molasses—
U. States, 600 brls. 3,399 c. J. Forsey
,, 500 2,785 Falkenburg & Hesse
,, 50 275 Deering & Robottom

Ochre—
France, 194 pks. W. Harrison & Co,
Holland, 50 Phillipps & Graves

Paraffin Wax—
U. States, 675 cs. Anglo-American Oil Co.
,, 250 brls. H. Hill & Sons

Phosphates—
Belgium, 240 t. West & Penrose
,, 200 Odams Chemical Manure Co.

Phosphoric Acid—
Germany, 8 pks. Fuerst Brs.

Potash—
Germany, 5 pks. J. Forsey

Potassium Bicarbonate—
Holland, 13 pks. A. & M. Zimmermann

Potassium Bromide—
Germany, 5 pks. R. W. Greeff & Co.

Potassium Carbonate—
Germany, 6 t. R. W. Greeff & Co.
,, 29 4 c. J. M. Steel & Co.
,, 1 9 H. Lambert
,, 6 Petri Brs.
,, 1 R. Warner & Co.
Canada, 7 Charles & Fox

Potassium Oxalate—
Holland, 40 pks. R. W. Greeff & Co.

Potassium Oxymuriate—
Sweden, 200 pks. G. Boor & Co.

Red Lead—
Holland, 32 pks. J. Matton

Rosin—
Holland, 9 brls. J. Owen
,, 6 Phillipps & Graves
U. States, 200 Union Ltge. Co , Ld.
,, 6,122 H. Hill & Sons
,, 5,000 F. & S. Chiesman & Co.

Saltpetre—
E. Indies, 150 bgs. A. Hunter & Co.
,, 749 A. B. Curtis & Co.
Germany, 63 cks P. Hecker & Co.

Salicylic Acid—
Germany, 32 pks. Butler's Wf., Ld.

Sodium Hyposulphite—
Holland, 10 t. R. Warner & Co.

Sodium Prussiate—
Belgium, 6 pks. J. Owen
France, 22 ,,

Starch—
Holland, 20 pks. G. S. N. Co.
,, 350 Little & Johnston
,, 48 Hernu, Peron, & Co.
Belgium, 50 F. Claydon & Co.
,, 40 C. Tennant, Sons, & Co.
,, 74 Leach & Co.
,, 100 J. Harrison
,, 1,328 T. H. Lee
,, 240 Becker & Wagner
Germany, 3,450 Horne & Co.
,, 6 Butler's Wf., Ld.
France, 120 W. E. Cole
,, 160 R. Lehmann & Co.
U. States, 50 R. G. Hall & Co.
,, 5,200 Union Ltge. Co., Ld.
,, 355 Beck & Pollitzer
,, 250 R. Bennett & Co.
,, 300 C. Tennant, Sons, & Co.
,, 100 W. G. Taylor & Co., Ld.
,, 240 Becker & Wagner
———, 30 G. S. N. Co.

Stearine—
France, 60 pks. H. Hill & Sons
U. States, 196 Fairclough, Dodd, & Jones
Belgium, 38 bgs. D. C. Thomas & Sons

Sulphur—
Italy, 600 t. Brandram Brs. & Co.

Sulphuric Acid—
Germany, £160 H. Lambert

Tallow—
Sydney, 67 cks. C. A. & H. Nichols
,, 15 N. Z. L. & M. A. Co.
,, 324 Elkan & Co.
,, 100 Perkins & Homer
,, 98 Cuthbert & Hall
,, 334 Bessler, Waechter, & Co.
,, 13 Culverwell, Brooks, & Co.
,, 119 Hoare, Wilson, & Co.
,, 343 Goad, Rigg, & Co.
,, 925 cs. G. S. Yuill & Co.
,, 127 cks. ,,
,, 50 Mordaunt Brs.
,, 17 L. & I. D. Jt. Co.
,, 1,644 Phillipps & Graves
,, 199 J. R. Francis & Co.
,, 270 Union Ltge. Co., Ld.
,, 196 A. B. Curtis & Co.
,, 32 J. W. Cook & Co., Ld.
N. Zealand, 142 ,,
,, 245 Phillipps & Graves
,, 58 L. & I. D. Jt. Co.
,, 10 Deering & Robottom
,, 25 Dalgety & Co., Ld.
,, 59 J. Groves
,, 16 N. Z. L. & M. A. Co.
,, 265 J. W. Cook & Co., Ld.
,, 55 Brown & Elmslie
,, 3 Anning & Cobb
,, 150 J. Owen
,, 55 N. M. & A. Co.
Auckland, 17 Deering & Robottom
,, 27 Flack, Chandler, & Co.
France, 11 C. S. Lovell
,, 132 bgs. H. Hill & Sons
U. States, 400 trcs. Cuthbert & Hall
,, 845 C. S. Lovell
,, 310 brls. Price's Pat. Candle Co.
Channel Is., 5 Cheesewright & Ford
Adelaide, 319 cks. J. W. Cook & Co., Ld.
Queensland, 216 Phillipps & Graves
,, 2 Elkan & Co.

Tartar—
Italy, 8 pks. Fellows, Morton, & Co., Ld.
" 16 Howards & Sons
France, 60 Lon. & Til. Ltge. C. & D. Co.

Tartaric Acid—
France, 40 pks. F. C. Devon & Co.
Holland, 30 Kirkpatrick, Barr, & Co.
Germany, 1 A. Jeward
Belgium, 4 F. C. Devon & Co.
" 5 R. W. Greeff & Co.

Ultramarine—
Holland, 15 pks. J. Barber & Co.
" 2 G S N. Co.
" 10 W. Harrison & Co.
" 4 Phillipps & Graves
Germany, 7 J. Kitchin, Ld.

Varnish—
Australia, 34 pks. Wright, Kerr, & Co.
Germany, 17 Butler's Wf., Ld.
" 3 Drolenvaux & Bremner
" 28 L. & I. D. Jt. Co.
Belgium, 1 Sawyer, Sons & Co.
U. States, 26 Atlantic Transport Co.

Verdigris—
France, 2 pks. B. & F. Wf. Co., Ld.

White Lead—
Holland, 51 pks. W. A. Rose & Co.
" 72 Randall Brs.
" 96 T. & W. Farmiloe, Ld.
Belgium, 105 "
" 52 J. L. Lyon & Co., Ld.
" 4 J. E. Kitton
Germany, 80 Steinhoff, Sons, & Co.

Wolfram Ore—
Australia, 2 t. Major & Field

Wood Pulp—
U. States, 3,896 pks. Henderson, Craig, & Co.
" 42 Lon. & Til. Ltge. C. & D. Co.
Sweden, 250 Tough & Henderson
" 150 Christophersen, Andrews, & Co.
" 640 W. G. Taylor & Co., Ld.
" 240 Alsing & Co., Ld.
Canada, 5,200 W. D. Cork
" 605 A. E. Reed & Co
" 1,780 Furness, Withy, & Co.
Germany, 134 Henderson, Craig, & Co.
Norway, 840 J. Sharp
" 328 W. G. Taylor & Co., Ld.
" 800 W. D Cork
" 1,200 E. J. & W. Goldsmith
Belgium, 1,936 J. Harrison

Zinc Oxide—
Holland, 105 pks M. Ashby, Ld.
U. States, 400 "
Germany, 180 "
France, 15 R. W. Greeff & Co.
" 5 J. Matton

Zinc White—
Belgium, 92 pks. Kerestedji & Co.

LIVERPOOL.

Week ending May 18th.

Antimony—
Valparaiso, 80 bgs. Hainworth Watson

Barytes—
Antwerp, { 53 cks. 149 bgs.
Hamburg, 100

Bone Ash—
Campana, 2,083 bgs.

Caoutchouc—
Havre, 5 bls. Cunard S.S Co.

Citric Acid—
Bordeaux, 10 cks.

Colours—
Antwerp, { 5 cks. 10 cs.

Cottonseed Oil—
N. Orleans, 1,500 brls.
New York, 20

Cream of Tartar—
Bordeaux, 33 cks.
Marseilles, 2

Dyestuffs—
Cutch
Rangoon, 2,349 bxs.
Extract
Antwerp, 100 bgs.
Bordeaux, 100 cks.
Havre, 24 Cunard
8 cs. S. S. Co.
Rotterdam, 40 cks.
Saffron
Bordeaux, 1 cs.
Tannin Extract
Marseilles, 250 cks.
New York, 100 brls.
Verdigris
Marseilles, 1 brl.

Dyewood Extract—
Antwerp, 6 cks.

Glucose—
Boston, 1,049 brls.
New York, 100

Glue—
Antwerp, 1 ck.
Hamburg, 40 bgs.
Rotterdam, 37 cks.

Manganese—
Hamburg, 13 cks.

Manganese Ore—
Bordeaux, qty.
Coquimbo, 1,267 t. 14 c.

Molasses—
N. Orleans, 1,500 brls.

Ochre—
Marseilles, 22 cks.

Paint—
Marseilles, 17 cs. Hawkes & Co.

Paraffin Wax—
New York, 355 brls. Thompson & Bedford
Rangoon, { 79 bgs. 800 bxs.

Phosphates—
Antwerp, 500 bgs.
Br'nsw'k, Ga. 2,448 t.

Phosphorus—
Montreal, 75 cs.

Potash—
Montreal, 22 brls.

Pyrites—
Huelva, 5,016 t. Mathieson & Co

Red Lead—
Rotterdam, 27 cks.

Rosin—
Baltimore, 600 brls.

Saltpetre—
Hamburg, 10 cks.

Soap—
Boston, 10 cs. W. Foggett
N. Orleans, 3,364 brls.

Starch—
Antwerp, 269 cs.
Baltimore, 500 bgs.
Rotterdam, 20 cs.

Stearine—
Antwerp, 10 bgs.
Rotterdam, 13 bls.

Sulphur—
Huelva, 1,749 t. Mathieson & Co

Tallow—
Boston, 65 tcs.
Campana, 495 cks.
New York, 350 hds.
Pensacola, 1,030 tcs.

Tartaric Acid—
Marseilles, 10 cks.

Ultramarine—
Antwerp, 10 cs.
Rotterdam, 16 cks

Varnish—
Rotterdam, 3 cks.

White Lead—
Antwerp, 13 cks.
Rotterdam, 61

Wood Pulp—
Boston, { 583 rolls 237 pks.
Rotterdam, { 157 bls. 82 sks.

Zinc Carbonate—
Hamburg, 1 ck.

Zinc Oxide—
Antwerp, { 89 brls. 1 cs.
New York, 230 brls.

Zinc White—
Hamburg, 80 cks.

MANCHESTER.

Week ending May 20th.

Acetate of Lime—
New York, 3,711 bgs.

Dyestuffs—
Extract
Rouen, 1 ck.

Dyewood Extract—
New York, 30 brls.

Farina—
Hamburg, 250 bgs.

Glucose—
New York, 2,099 brls.

Glue—
Rouen, { 27 cks. 100 cs. 60 bls. 70 bgs.

Paraffin Wax—
New York, 2,860 brls.

Potash—
New York, 1 ck.

Soap—
New York, 4 cs.

Starch—
Hamburg, 140 cs.
New York, 800 bgs.

Tallow—
New York. 150 hds.

Wood Pulp—
Gothenburg, 4,594 bls.
New York, 956

Zinc Oxide—
New York, 102 brls.

HULL.

Week ending May 20th.

Acids—
Boston, 15 brls. Wilson, Sons, & Co., Ld.

Ammonium Oxalate—
Rotterdam, 2 cks. Hull & Netherlands S. S. Co.

Antimony—
Hamburg, 20 cs. Wilson, Sons, & Co., Ld.
Leghorn, 56 cks. "

Barytes—
Amsterdam, 106 cks. Hull & Netherlands S. S. Co.
Antwerp, 154 " Wilson, Sons, & Co., Ld.
Bremen, 79
Rotterdam, 41 Hull & Netherlands S. S. Co.
50 bgs.

Boracic Acid—
Leghorn, 9 cks. Wilson, Sons, & Co., Ld.

Castor Oil—
Venice, 15 cs. Wilson, Sons, & Co., Ld.

Chemicals *(otherwise undescribed)*
Amsterdam, 1 cs. Hull & Netherlands S. S. Co.
Antwerp, 2 cks. Wilson, Sons, & Co., Ld.

Coal Products—
Alizarine
Rotterdam, 114 pks. Hull & Netherlands S. S. Co.
Aniline
Rotterdam, 44 pks. Hull & Netherlands S. S. Co.
Naphthol
Rotterdam, 10 cks. Hull & Netherlands S. S. Co.
Naphthaline
Antwerp, 25 bgs. Wilson, Sons, & Co., Ld.
Pitch
Copenhagen, 56 brls. Wilson, Sons, & Co., Ld.
Hamburg, 11 cks.
Tar
Stockholm, 10 brls. Wilson Sons. & Co., Ld.

Colours—
Amsterdam, 1 ck. Hull & Netherlands S. S. Co.
Antwerp, 13 Wilson, Sons, & Co., Ld.
Bremen, 1 cs. Veltmann & Co.
Rotterdam, 2 cs. Hull & Netherlands S. S. Co.
18 pks.
" { 94 3 brls.

Cottonseed Oil—
Alexandria, 28 brls. Wilson, Sons, & Co., Ld.

Dextrine—
Stettin, 50 bgs. Wilson, Sons, & Co., Ld.

Dyestuffs—
Extract
Dunkirk, 10 cks. Wilson, Sons, & Co., Ld.
Fiume, 105 brls. "
New York, 50 bxs
Trieste, 20 brls. "
Myrabolams
Bombay, { 3,231 bgs. 1,399 pckts.
Shumac
Palermo, 1,150 bgs. Wilson Sons, & Co., Ld.
" 100

Farina—
Antwerp, 25 bgs. Wilson, Sons, & Co., Ld.
Stettin, 1,798 "

Fluor Chrome—
Rotterdam, 3 pks. Hull & Netherlands S. S. Co.

Glucose—
New York, 250 brls.
Rotterdam, 65 bgs. Hull & Netherlands S. S. Co.
Stettin, 100 Wilson, Sons, & Co., Ld.

Glue—
Christiansund, 2 cs. Wilson, Sons, & Co., Ld.
Hamburg, 40 bgs. "

Lead Acetate—
Amsterdam, 4 cks Hull & Netherlands S. S. Co.

Linseed Oil—
Amsterdam, 639 brls. Hull & Netherlands S. S. Co.

Lithopone—
Amsterdam, 40 cks. Hull & Netherlands S. S. Co.

Manure—
Bombay, 500 bgs.

Ochre—
Marseilles, 108 cks.

Paint—
Amsterdam, 1 dm. Hull & Netherlands S. S. Co.
Rotterdam. 6 "

Paraffin Wax—
New York, 950 brls.

Phosphates—
Dunkirk, 1 pk.
Ghent, 256 t.

Potash—
Antwerp, 105 cks.
Dunkirk, 78 Wilson,
19 dms. Sons, & Co., Ld.
Hamburg, 21 Bailey & Leetham, Ld.
New York, 6 cks.

Potassium—
Antwerp, 6 bgs. Wilson, Sons, & Co., Ld.

Red Lead—
Rotterdam, 6 cks.

Rosin—
Trieste, 15 cs. Wilson, Sons, & Co., Ld.

Saltpetre—
Antwerp, 135 bgs. Wilson, Sons, & Co., Ld.

Soap—
Bari, 448 cs. Wilson, Sons, & Co., Ld.
Naples, 25 "

Soda—
Antwerp, 10 cks. Wilson, Sons, & Co., Ld.
Fiume, 20 brls. "
Ghent, 50 bgs. "

Starch—
Amsterdam, 40 cs. Hull & Netherlands S. S. Co.
Ghent, 170 Wilson, Sons, & Co., Ld.

Stearine—
Amsterdam, 32 bgs. Wilson, Sons, & Co., Ld.

Sulphur—
Catania, 102 cks. Wilson,
960 bgs. Sons, & Co., Ld.
" 20

Tallow—
Boston, 300 trcs. Wilson, Sons, & Co., Ld.
Dunkirk, 88 cks. "
New York, 180 "
" 25 hds.

Tartar—
Bari, 71 cks. Wilson, Sons, & Co., Ld.
Bordeaux, 10
Naples, 24 "
Tartaric Acid—
Rotterdam, 2 cks. Hull & Netherlands S. S. Co.
Ultramarine—
Rotterdam, 5 cks. Hull & Netherlands S S Co.
Waste Salt—
Hamburg, 740 bgs.
White Lead
Antwerp, 4 cks. Bailey & Leetham, Ld
Rotterdam, 90 Hull & Netherlands S. S. Co.
Wood Pulp—
Abo, 24 bls. J. Good & Sons
" 88
Boston, 96 bdls.
Christiania, 14 cs. Wilson,
1,363 bls. Sons, & Co., Ld.
Drontheim, 1,080 "
Gothenburg, 10 bdls. "
" 1,003
New York, 579 rolls "
Stockholm, 59 bls. H. Briges & Co.
" 98 W. Shipstone & Co.
Zinc Oxide—
Antwerp, 24 brls. Bailey & Leetham, Ld.
Hamburg, 25 cks. Wilson, Sons, & Co., Ld.

GLASGOW.

Week ending May 25th.

Acetic Acid—
Rotterdam, 20 crbys.
Barium Sulphate—
Antwerp, 50 bgs. 73 cks.
Barytes—
Rotterdam, 188 cks. J. Rankine & Son
Amsterdam, 24 "
Bichromate—
Hamburg, 20 cks. J. Currie & Co.
Bleaching Powder—
Rotterdam, 45 cks. J. Rankine & Son
Castor Oil—
Marseilles, 60 brls.
Chemicals *(otherwise undescribed)*
Amsterdam, 1 cs J. Rankine & Son
Rotterdam, 20 cks. 18 "
Coal Products—
Alizarine
Rotterdam, 18 cks. J. Rankine & Son
Aniline
Rotterdam, 7 cks. 8 cs.
Aniline Colours
Amsterdam, 1 ck. J. Rankine & Son
Colours—
Hamburg, 27 pks. J. Currie & Co.
Rotterdam, 10 cks. 1 cs, J. Rankine
71 pks. & Son
Cottonseed Oil—
Rotterdam, 50 brls. J. Rankine & Son
Cream of Tartar—
Marseilles, 7 cks.
Dyestuffs—
Cutch
Rangoon, 136 bxs. P. Henderson & Co.
Shumac
Palermo, 700 bgs.
Farina—
Delfszyhl, 740 bgs.
Glue—
Rouen, 30 cks.
Hamburg, 100 bls J. Currie & Co.
Rotterdam, 20 bgs. 10 cs. J. Rankine & Son
Oxalic Acid—
Rotterdam, 12 cks. J. Rankine & Son
Oxide of Iron—
Montreal, 50 kgs.
Paraffin Wax—
New York, 450— P. Henderson
Rangoon, 400 bxs. & Co
321 bgs.
Potash—
Hamburg, 60 cks. J. Currie & Co.
Rotterdam, 143 J. Rankine & Son
Pyrites—
Huelva, 1,740 t. Tharsis Co.
" 1,894 Rio Tinto Co.
Quebracho Wood—
Santafe, 1,955 blocks The British D. & C. Co., Ld.
Rosin—
New York, 701 brls.
Saltpetre—
Hamburg, 50 cks. J. Currie & Co.
Soap—
New York, 2,500 bxs.
Rotterdam, 10 cs. J. Rankine & Son
Soap Lyes—
Marseilles, 80 dms.
Starch—
Montreal, 330 sks.
Rotterdam, 12 cs. J. Rankine & Son
Antwerp, 171
Stearine—
Rotterdam, 10 brls. J. Rankine & Son
Tartaric Acid—
Rotterdam, 5 cks. J. Rankine & Son
Ultramarine—
Rotterdam, 4 cks. J. Rankine & Son
Varnish—
New York, 15 brls.
Waste Salt—
Hamburg 192 bgs. J. Currie & Co.
White Lead—
Rotterdam, 13 pks. J. Rankine & Son
Wood Pulp—
Gothenburg, 508 bls.
Montreal, 172 bdls.
Hamburg, 203 bls. J. Currie & Co.
Christiania, 1,888 J. T. Salvesen
4 cs. & Co.
Zinc Oxide—
New York, 420 brls.
Hamburg, 50 cks. J. Currie & Co.
Antwerp, 29 "
Zinc White—
Dunkirk, 25 cks.
Rotterdam, 75

TYNE.

Week ending May 20th.

Antimony—
Hamburg, 200 cs. Tyne S. S. Co.
Chemicals *(otherwise undescribed)*
Amsterdam, 1 cs. W. Swanston & Sons
Colours—
Amsterdam, 3 cks. W. Swanston & Sons
Hamburg, 11
Glue—
Antwerp. 2 cks. Tyne S. S. Co.
Phosphates—
Antwerp, 240 t. Langdale's Chemical M. Co.
Pyrites—
Huelva, 1,107 t. Tharsis Sulphur & Copper Co.
Starch—
Antwerp, 125 cs. Tyne S. S. Co.
Rotterdam, 50 "
Ultramarine—
Rotterdam, 2 cks Tyne S. S. Co.
Wood Pulp—
Christiania, 400 bls. P. H. Matthiessen & Co.
Zinc White—
Antwerp, 25 cks. Tyne S. S. Co.

GOOLE.

Week ending May 17th.

Alumina Sulphate—
Ghent, 40 bgs
Antimony—
Boulogne, 6 cks.
Barytes—
Antwerp, 40 bgs.
Caoutchouc—
Boulogne, 9 cks.
Chemicals *(otherwise undescribed)*
Rotterdam, 4 cks.
Colours—
Amsterdam, 1 cs.
Boulogne, 12 cks. 1 97 pks.
Hamburg, 5
Rotterdam, 589 51 8
Copper Oxide—
Rotterdam, 10 cs.
Farina—
Delfszyhl, 623 bgs.
Hamburg, 100
Glue—
Antwerp, 25 bs.
Ghent, 3 bgs.
Rotterdam, 40
Iron Pyrites—
Huelva, 600 t.
Phosphates—
Ghent, 500 bgs.
Potash—
Hamburg, 19 cks.
Saltpetre—
Hamburg, 17 cks.
Rotterdam, 100 bgs.
Starch—
Ghent, 120 bxs.
Waste Salt—
Hamburg. { 508 bgs. 495 t.
Wood Pulp—
Fredrikshald, 250 t.

GRIMSBY.

Week ending May 20th.

Caoutchouc—
Antwerp, 1 bs. 4 cs.
Hamburg, 2
Rotterdam, 1
Chemicals *(otherwise undescribed)*
Hamburg, 6 cks.
Coal Products—
Pitch
Hamburg, 88 cks.
Colours—
Antwerp, 1 ck. 118 pks.
Hamburg, 47 9 cs. 214
Rotterdam, 1 kg. 8
Dyestuffs *(otherwise undes.)—*
Dieppe. 10 cks.
Dyestuffs—
Indigo
Hamburg, 1 ck.
Farina—
Hamburg, 200 bgs.
Ferro Chrome—
Antwerp, 20 cs.
Glue—
Hamburg, 5 cks.
Salt—
Hamburg, 500 bgs.
Starch—
Antwerp, 50 cs.
Wood Pulp—
Malmo, 60 bs.

EXPORTS OF CHEMICAL PRODUCTS

AT

THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending May 25th.

Acids—
Cape Town, 2 cs. £13
Colombo, 18 29
Hobart, 4 cks. 16
Alkali—
Auckland, 5 t. £30
Ammonia—
Rangoon, 20 cs. £47
Pt. Elizabeth, 10 15
Ammonium Carbonate—
Hamburg, 4 cks. 7 pks. £51
Rotterdam, 15 27
Ammonium Muriate—
Cologne, 17 cks. £85
Ammonium Sulphate—
Barbadoes, 51 t. £620
Sourabaya, 557 19 c. 5,910
Tegal, 103 1,293
Cheribon, 132 1,635
Guadeloupe, 15 165
Arsenic—
San Francisco, 3 t. 5 c. £60
Bone Ash—
Melbourne, 1 t. £22
Boracic Acid—
Bombay, 1 t. £25
Borax—
Durban, 5 c. £10
Rockhampton, 2 t. 3 34
Yokohama, 3 49
Carbonic Acid Gas—
Channel Is., 40 tubes £15
Caustic Soda—
E. London, 4 t. 18 c. £41
Terceira, 6 5 45
Napier, 5 6 35
Samarang, 10 18 72
Sourabaya, 10 18 72
Hong Kong, 1 5 25
Canterbury, 13 41
Durban, 5 8
Chemicals *(otherwise undescribed)*
Rotterdam 19 kgs. £113
Cape Town, 2 pks. 10
Hamburg, 10 86
Brussels, 10 kgs. 76
Antwerp 10 57
Larache, 6 brls. 5
Casablanca, 6 5
Auckland, 1 43
E. London, 2 10
Madras, 10 31
Karachi, 2 cs. 13
Demerara, 125 33
Leghorn, 16 114
Chloride of Lime—
E. London 1 t. £8
Citric Acid—
Sydney, 5 c. £33
Hamburg, 1 t. 10 178
Durban, 1 7
Malta, 2 kgs. 2 28
St. Petersburg, 5 35
Palermo, 2 16
Copenhagen, 10 60
Genoa, 1 t. 122
Brisbane, 1 93 pks. 70
Riga, 2 14
Lisbon, 1 126
Coal Products—
Aniline Colours
Barcelona, 1 kg. £15
Aniline Dyes
Lyttelton, 2 cs. £17
Aniline Salt
Genoa 10 cks. £60
Anthracene
Rotterdam, 420 cks. £590
Benzol
Boulogne, 50 cks. £168
Carbolic Acid
New York, 10 cks. £73
Philadelphia, 6 cs. 21
Melbourne, 100 dms. 3
Pt. Elizabeth, 1 7
Auckland, 1 3
Shanghai, 1 pk. 8
Boston, 176 1,280
Coal Tar Dyes
Boston, 3 pks. £93
Naphthaline
New York, 55 cks. £60
Ruhrort, 1,520 bgs. 365
Pitch
Calcutta, 8 brls. £8
Rotterdam, 50 46
New York, 100 dms. 18
Cadiz, 200 t. 250
Havre, 50 9
Melbourne, 20 14
Antwerp, 2,017 2,853
Hamburg, 47 cks. 150

Tar
Jamaica, 5 dms. £6
Vladivostock, 50 8
Havre, 100 16
Trinidad, 10 cs. 7
Pt. Flizabeth, 950 8
Newcastle, 7 rnlts. 13
Tar Oil
Pt. Elizabeth, 50 cks. £44

Coal Products (*otherwise undes.*)—
Paris, 2 cks. £14

Copper Sulphate—
Genoa, 30 t. £777
Naples, 12 10 c. 324
Leghorn, 106 2 747
Piræus, 1 3 31

Cream of Tartar—
Wellington, 1 t. 7 c. £103
Melbourne, 1 73
Fremantle, 10 41
Auckland, 10 4 cs. 120

Disinfectants—
Sydney, 4 cs. £13
Colombo, 3,500 dms. 750
Cape Town, 100 36
Penang, 250 115
Auckland, 5 31
Montreal, 5 pks. 10
Calcutta, 425 95
Melbourne, 10 brls. 4 13 58
New York, 37 1·5

Glycerine—
New York, 35 t. 14 c. £970

Manure—
Landerneau, 230 t. £1,200
Trinidad, 10 90
St. Kitts, 26 7 c. 215
Barbadoes, 303 18 2,800
Guadeloupe, 11 1 0
Demerara, 20 183

Oxalic Acid—
Newcastle, 2 t. 1 c. £59

Potassium Chlorate—
Madeira, 1 c. £20

Potassium Cyanide—
Rangoon, 1 c. £8
Delagoa Bay, 60 cs. 619
Auckland, 60 301

Potassium Prussiate—
Sydney, 5 c. £19
Yokohama, 2 t. 127

Saltpetre—
Wellington, 10 c. £11
Vigo, 3 t. £2
Madeira, 6 pks. 18

Sheep Dip—
B. Ayres 4 t. 4 c. £164

Soda —
Colombo, 16 c. £5
Pt. Elizabeth, 2 t. 16 8
Vladivostock, 2 4 9
Singapore, 2 8 13

Soda Crystals—
Colombo, 1 t. 12 c. £6
Pt. Elizabeth, 4 1 13
Gibraltar, 1 5

Sodium Bicarbonate—
Wellington, 5 c. £6
Barbadoes, 1 t. 6

Sodium Silicate—
Terceira, 6 t. 4 c. £22

Sulphur—
E. London, 1 t. 11 c. £15

Sulphuric Acid—
Pt. Elizabeth, 50 cs. £38

Superphosphates—
Guadeloupe, 80 t. £280

Tartaric Acid—
Fremantle, 4 c. £24
Yokohama, 1 t. 1 114

LIVERPOOL.

Week ending May 24th.

Aluminous Cake—
Calcutta, 26 t. 3 c. 3 q. £88
Melbourne, 7 3 3 32

Ammonia—
La Guayra, 7 c. 2 q. £7

Ammonium Carbonate—
Genoa, 2 t. £50
Hamburg, 12 c. 18
B. Ayres, 1 2 36
Hiogo, 2 5 50

Ammonium Muriate—
B. Ayres, 6 c. £5
San Francisco, 2 t. 19 5
Philadelphia, 17 3 3 q. 33

Ammonium Sulphate—
Valencia, 20 t. 5 c. 1 q. £203
Tarragona, 10 110
Teneriffe. 9 10 110
Philadelphia, 25 9 3 255
Malaga, 51 10 645
Gd. Canary, 37 3 397
Cartagena, 15 160
Las Palmas, 87 7 1,056
Hong Kong, 50 5 550

Antimony Salt—
Lisbon, 5 c. £15

Arsenic—
Rio G. do Sul, 12 c. £15

Barium Chlorate—
New York. 1 t. 15 c. £94

Basic Slag—
La Rochelle, 736 t. 4 c. 3 q £1,104
Nantes, 323 12 485

Bichrome—
Lisbon, 7 c. 1 q. £9

Bisulphite of Lime—
Bombay, 270 galls. 5 hds. £7

Bleaching Powder—
Amsterdam, 84 cks.
Boston, 40
Detroit, 27
Maranham, 6
Montreal, 22 60 brls.
Naples. 20
Newport News, 122
Rotterdam, 11
Rouen, 10
Trieste, 31
Vera Cruz, 17
Aarhuus, 43
Alicante, 12
Bahia, 55
Baltimore, 55
Bordeaux, 37 20
Boston, 27
Cleveland, 20
Naples, 29
Philadelphia, 218
Spring Grove, 81
Venice, 15
Vercelli, 93

Boracic Acid—
Rotterdam, 1 t. £28
Brisbane, 1 25
Melbourne, 1 2 c. 27

Borax—
Vera Cruz, 16 c. 2 q. £13
Hamburg, 13 t. 1 1 222
Stettin, 10 4 1 174
Lisbon, 4 5 72
Ibrail, 3 38
Rotterdam, 2 34
B. Ayres, 1 15
Yokohama, 2 1 3 24

Calcium Chloride—
Bari, 30 t. 5 c. £67
Odessa, 10 3 21

Castor Oil—
Adda 6 cs
C. Coast Castle, 7

Caustic Potash—
Boston, 1 t. 1 c. £26

Caustic Soda—
Adelaide, 30 dms 6 cs.
Alexandria, 55
Alicante, 30
Amsterdam, 8 brls.
Antwerp, 35
Barcelona, 300 20 cks.
B. Ayres, 50
Bari, 24
Bilbao. 73 28
Bombay, 106
Boston, 25
Calcutta, 50
Catania, 30
Chicago, 50 bxs.
Cienfuegos, 16
Funchal, 15
Genoa, 418
Gijon, 6
Gothenburg, 18
Hamburg, 121
Havre, 87
Hiogo. 223
Leghorn, 103
Libau, 60
Lisbon, 34
Malta. 10
Melbourne, 35 12 cs.
Messina, 20
Montreal, 69 pks.
Naples, 37
Oporto, 96
Para, 20
Philadelphia, 250
Piræus, 30
Portland, Or., 30
Quebec, 60
Rio de Janeiro, 10
Rotterdam, 35 49
Rouen, 82
San Francisco, 75
Santander, 10
Singapore, 10
Sfax, 5
Sydney, 14
Toronto, 20
Trieste, 15
Valparaiso, 50
Vera Cruz, 50
Vigo, 39
Yokohama, 10

Chemicals (*otherwise undescribed*)
Malaga, 3 t. 3 c. £18
Galatz, 20 kgs. 4 4 2 q. 53
Philadelphia, 23 10 591
Singapore, 1 10 3 10
Hiogo, 5 cks. 40
Vancouver, B.C., 18 5
New York, 21 11 597
Lisbon, 10 10 2 21
Rangoon, 1 10 9
Montreal, 4 cks. 20
Hobson's Bay, 1 2 2 6
Alexandria, 1 33
Madras, 3 5 10
Melbourne, 6 14 2 31
Adelaide, 10 3
Perth, 3 300
Habana. 7 3 3 22

China Clay—
Boston, 29 t. 5 c.
Maranham, 16 cks.
Messina, { 20 t. / 4 cks.
Montreal, 500 bgs.
Naples, 40
Newport News, 400
Philadelphia, 150
Ranegunge, 140
Windsor Mills, 200
Boston, 1,290
Calcutta, 80
Dundas, 30
Georgetown, 200
Lisbon, 4 100
Madras, 80
New York, 334
Pernambuco, 40

Chloride of Lime—
Boston, 1 t. 1 c. £7
B. Ayres, 3 12

Coal Products—
Alizarine
Alicante, 9 cks.
Aniline Colours
Barcelona, 7 kgs.
Boston, 5
Lisbon, 1
New York, { 10 / 14 cks.
Aniline Oil
Barcelona, 17 cks.
Hamburg, 8 dms.
Aniline Salt
Beyrout, 28 pks.
Boston. 60 cs.
Vera Cruz, 10 cks.
Carbolic Acid
Rouen. 8 t. 9 c. £562
Vera Cruz, 18 3 q. 13
Creosote Oil
Bordeaux, 250 brls.
Naphtha
Melbourne, 20 dms.
Adelaide, 25
Pitch
Cette, 275 t.
Antwerp, 82 18 c.
Beyrout, 112 brls.
Genoa, 302
Tar
Akassi, 6 lds.
Bordeaux, 9 t. 13 c.
Galatz, 40 brls.
Bilbao, 3 cks.
Cabedella, 10
Yloyla, 100 bxs.

Cobalt Oxide—
Gijon, 2 c. £62

Copperas—
Salonica 19 c. 3 q. £3
Vera Cruz, 2 t. 16 2 6

Copper Sulphate—
Cette, 210 t. 11 c. 1 q £5,160
St. Louis, 10 14
Vigo, 18 1 415
Almeria, 1 25
Rio de Janeiro, 12 2 16
Bordeaux, 284 13 3 4,810
Leghorn, 20 2 507
Ancona, 30 5 3 787
Bari, 37 7 937
Genoa, 80 16 1 2,003
Lisbon, 19 16 325
Vera Cruz, 1 19 3 51
Johannesburg, 1 24
Venice, 60 7 3 1,538
Brindisi, 1 3 1 23
Halifax, 1 4 3 31

Cyanide—
Delagoa Bay. 11 c. 2 q. £44

Disinfectants—
Hiogo, 2 q. £5
Para, 2 c. 1 8

Glycerine—
Calcutta, 5 c. £13
New York, 10 t. 5 255

Lead Acetate—
Lisbon, 11 c. £11

Lead Nitrate—
Kingston, 5 t. 4 c. £100

Magnesia—
Bilbao, 20 cs.
Lisbon, 1 c.
Trieste, 1 cs.
Barcelona, 20
New York, 14 pks.
Paris, 74
Vera Cruz, 2

Manure—
Gd. Canary, 2 t. £24
Genoa. 10 13 c. 40
Marseilles, 24 80

Oxalic Acid—
San Francisco, 3 t. £100

Paint—
Antwerp, 23 kgs. 4 cks.
Aquadilla, 2
B. Ayres, 24
Blue Fields, 72 6
Bombay, 205 dms.
Cabedella, 75
Calcutta 400
Cape Town, 20
Dunkirk, 19 1 brl. 9
Fernando Po, 35
Genoa, 21
Gibraltar, 87 pks.
" 15 1 bx. 12 cks.
Hamburg, 78 1 10
Havana. 25 5
Lisbon, 40
Mayaguez, 9
Nassau, 140 5
Newfoundland, 1 cs.
Old Calabar, 45 pks.
Pt. Said, 18 12
Rotterdam, 15
St. John's, Nfd. { 3 dms. 1 51 cks. / 2 / 145 pks.
San Juan, 80 kgs. 2 cks 556
Santiago, 2 cks.
St. Domingo, 22
Tripoli, 196 pks.
Valparaiso. 203 33
Vera Cruz, 103
Yloyla, 100 14 cks.
Yokohama, 300

Painters Colours —
Algoa Bay, 44 pks.
B. Ayres, 25 cks.
Calcutta, 2
Callao, 10
Hamburg, 165 bgs.
Havana. 30—
Hong Kong, 10
Ibrail, 40 kgs.
Johannesburg, 18 cs.
Lisbon, 1 1 6
Maranham, 2
Melbourne. 40 67
Montserrat, 2
Para 53 pks.
Puerto Plata, 4
Tumaco. 4
Vera Cruz, 10 cks.

Paraffin Wax—
Larnaca, 4 cs.
Venice, 19 bgs.

Phosphorus —
Hiogo, 15 cs. £146
Kingston, 4 49
Kobe. 3 t. 2 c. 595
S. Luis Potosi, 6 cs. 52
Vera Cruz, 20 215

Potash—
B. Ayres, 17 c. 3 q. £12

Potassium Bicarbonate—
New York, 1 t. 2 c. 1 q. £20
Rio de Janeiro, 8 2
Vera Cruz,

Potassium Chlorate—
Amsterdam, 10 cks. £16
Boston, 5 t. 163
Copenhagen, 1 10 c. 45
Gothenburg, 4 18 130
Gutujewsky, 20 600
Hiogo, 5 160
Konigsberg, 10 300
Libau, 15 481
Melbourne, 1 30
Montreal, 1 10 45
New York, 7 10 239
Rio de Janeiro, 8 16
S. Luis Potosi, 1 10 48
Sydney, 6 182
Vera Cruz, 3 5 103

Potassium Prussiate—
Vera Cruz, 2 t. £110

Potassium Silicate—
Amsterdam, 1 t. 8 c. £1

Salammoniac—
Alexandria, 1 t. 1 c. 3 q. £35
B. Ayres, 10 17
Naples, 2 62
Philadelphia, 5 2 2 169
Trieste, 1 31

Salt—
Akassa, 601 t. 15 c.
Algoa Bay, 17 17
Antwerp, 182 13
Australia, 75
Bakana, 40
Baltimore, 710 7
Benin, 45 17
Boston, 500
B. Ayres, 251 10
Calcutta, 3,767
C. C. Castle, 22 6
Cape Town, 24 18 50 cs.
Cameroons, 132 19
Cardenas, 30
Christiania, 15 250
Conakry, 55 1
Degama, 50
Gothenburg, 7 6
E. London, 3
Halifax, 0 kgs. / 210 t.
Hamburg, 1 18
Havana, 10
Kingston, 5
Lagos, 7,110 bgs. / 1 0 t.
Malta, 5
Manaos, 7 17
Manila, 1
Mauritius, 175
Melbourne, 800 bgs. / 90 t.
Montreal, 473 10
Mossel Bay, 25
Newcastle, N.S.W., 100
N. Orleans, 200
Noqui, 40
Old Calabar, 70
Opobo, 75
Pasphebiac, 500
Portland, Or., 100
Quebec, 1,000
Rangoon, 1,356
Rio de Janeiro, 13
Rotterdam, 55
St. John, N.B., 10 pks.
San Francisco, 25
San Juan, 45 cs
Santos, 100
Sapeli 19 7
Sydney, 329
Stockholm, 49
Townsville, 127
Trinidad, 133 15
Warri, 6 5
Yokohama, 100

Salt Cake—
Antwerp, 120 t. £135
Baltimore, 65 10 c. 105
Wellington, N.Z., 3 1 7

Saltpetre—
Cabedello, 2 t. 16 c. £6 3
Para, 3 10 7 0

Sheep Dip—
Calcutta, 110 dms. £10
M. Video, 470 115

Soap—
Accra, 124 bxs.
Alexandria, 203
Algoa Bay, 2,048
Amsterdam, 200 cs.
Antwerp, 120
Bahia, 2
Barberton, 25
Batanga, 50
Beira, 500
Belize, 50
Benin, 350
Bona, 125
Bombay, 1,255 70
Boston, 1 2 cks.
B. Ayres, 32
Brussels, 1,800
Burutu, 1
Calcutta, 28 2 / 750 bdls.
C. C. Castle, 75
Cape Town, 710 165
Cape Lopez, 135
Cameroons, 400
Christiania, 80
Colombo, 110
Constantinople, 200 20
Curacao, 235
Delagoa Bay, 525 45 25
Durban, 650
E. London, 2,558 11
Egwanga, 560
Ferrol, 2 brls.
Funchal, 5
Galata, 27 cs.
Genoa, 1 ck.
Gibraltar, 50 20
Gd. Bassa, 48
Grenada, 100
Havana, 25
Iquitos, 2
Johannesb'rg, 1,850
Kin, 60
Karachi, 500
Kingston, 1,000 5
Lagos, 1,980
Las Palmas, 150
Ladysmith, 6
Leghorn, 1
Malta, 20 45
Manaos, 1,250
Manila, 1
Maraishing, 50
Maranham, 280
Marta, 50
Mauritius, 715
Montreal, 50
Mossel Bay, 100 580
Natal, 3 200 5 (skl.) / 50 bdls.
" 7 dms.
New York, 52 cs. 2 cks.
Old Calabar, 450
Opobo, 100
Panama, 1
Para, 1,850 370 bdls.
Pernambuco, 7 dms.
Pietersburg, 100
Piræus, 3 brls.
Pt. Elizabeth, 50 80 cs.
Porto Novo, 200
Pt. Said, 10 24 kgs
Rangoon, 1,406 50
Reunion, 509
Rio de Janeiro, 2 cks.
Rotterdam, 100 550
Rouen, 40
St. Thomas, 600
Salt Pond, 225
San Juan, 200
Sapeli, 500
Savanilla, 6
Shanghai, 9,640 13
Sierra Leone, 100 1
Singapore, 1,560 53
Smyrna, 70
Teneriffe, 251
Toronto, 1,000
Transvaal, 350
Valparaiso, 70 25
Warri, 100
Vloylo, 1
Zanzibar, 210 bdls.

Soap Lyes—
Hamburg, 25 t. 13 c. 2 q. £45
Rotterdam, 80 9 1,253

Soda—
Lisbon, 4 cks.

Soda Ash—
Adelaide, 269 cks.
Amsterdam, 1,000 bgs.
Antwerp, 500
Baltimore, 32 tcs.
Barcelona, 80
Bilbao, 300
Boston, 53 36
Calcutta, 150 kgs. 50
Christiania, 670 bgs.
Copenhagen, 250
Delagoa Bay, 10 kgs.
Funchal, 2
Genoa, 700 bgs.
Ghent, 334
Gothenburg, 50
Havre, 3 brls.
Kobe, 497
Leghorn, 84
New York, 308 60 80
Oporto, 10
Philadelphia, 37
Portland, 273
Reinosa, 15
Rotterdam, 400
San Sebastian, 23
Smyrna, 200
Sydney, 381
Toronto, 250 19
Trieste, 200
Venice, 200
Vigo, 5
Windsor, 320
Yokohama, 10

Soda Crystals—
Calcutta, 33 kgs.
Halifax, 35 brls.
Jaffa, 12
Malta, 600
Montreal, 284
Newcastle, 68

Sodium Arseniate—
Boston, 5 cks.

Sodium Bicarbonate—
Adelaide, 50 bgs. / 280 kgs.
Amsterdam, 100
Antwerp, 58 pks. / 2 cks.
Barcelona, 8
Beyrout, 30
Calcutta, 70
Calicut, 23 bgs.
Cape Town, 10
Christiania, 5 dms. / 12 pks.
Colombo, 21 kgs. 4
Constantinople, 90
Delagoa Bay, 100
France, 110 dms.
Genoa, 150
Ghent, 15
Guayaquil, 20
Hamburg, 30 cs.
Hong Kong, 24
Jaffa, 50
Kobe, 600
Kurrachee, 125
Naples, 10
N'castle, N.S.W. 40
Odessa, 165
Oran, 75
Patras, 56
Port Royal, 4 cks.
Puerto Cabello, 20 bgs.
Santiago, 8 brls.
Singapore, 12
Smyrna, 50 kgs.
Sydney, 320 15
Toronto 100
Townsville, 400
Trieste, 80
Varna, 25
Venice, 310
Vera Cruz, 75
Yokohama, 50

Sodium Bichromate—
Alicante, 10 cks.

Sodium Bisulphide—
Alicante, 5 cks.

Sodium Carbonate—
Boston, 56 brls.

Sodium Chlorate—
Amsterdam, 10 cks.
Boston, 100 bgs.
Rotterdam, 5 kgs.
Shanghai, 170
Seville, 10
Vera Cruz, 4 cks.

Sodium Hydrosulphite—
Montreal, 14 cks. 20 brls. / 90 kgs.

Sodium Hypochlorite—
Calcutta, 4 cks.

Sodium Hyposulphite—
Tampico, 300 kgs.

Sodium Oxide—
Trieste, 5 cs.

Sodium Prussiate—
Philadelphia, 13 cks.
Providence, 13

Sodium Silicate—
Gijon, 12 brls
Santander, 10

Sodium Stannate—
Calcutta, 4 cks.

Sodium Sulphate
Rotterdam, 42 brls.

Starch—
Dunedin, N.Z., 60 cs.
Germany, 60 bgs.
Iquitos, 5
Lisbon, 3 cks.
Oporto, 15 bgs.

Sulphur—
Boston, 250 t. 4 c. £2,038
Cabedello, 1 10 3 q. 14
Calcutta, 6 28
Chatham, 50 2 251
Montreal, 4 9 21
Natal, 53 2 235

Sulphuric Acid—
Maranham, 1 t. 5 c. £21
Pernambuco, 11 8
Sierra Leone, 4 3

Superphosphates—
Barcelona, 35 t. 1 c. £105
Gd. Canary, 8 10 38
Hong Kong, 50 146
Valencia, 334 10 819

Strontia—
Hamburg, 1 t. £7

Tartaric Acid—
Santos, 3 c. £16

Tin Crystals—
Lisbon, 6 c. 1 q. £18

Varnish—
Alexandria, 2 brls.
Algoa Bay, 4 cs.
Antwerp, 14 cks.
Barcelona, 7 3 dms.
Bilbao, 4
Bluefields, 8
Cape Town, 15
Dunedin, N.Z., 18
Genoa, 4 pks. / 3 dms.
Gijon, 2
Hamburg, 3
Havana, 2
Hiogo, 40
Madras, 9
Melbourne, 21 18
Mollendo, 3
M. Video, 4
Naples, 2 brls.
Parahyba, 2 cs.
Yokohama, 3
Valparaiso, 5 1

White Lead—
Calcutta, 3 cks.
Odessa, 100
St. John's, N'fd., 8 80 kgs.
Vera Cruz, 2

Zinc Chloride—
Bombay, 10 t. 17 c. £154
Bourgas, 10 4 164

Zinc White—
Rouen, 10 t. £190

MANCHESTER.

Week ending May 24th.

Ammonium Sulphate—
Valencia, 1,778 bgs.

Bleaching Powder—
Sherbrooke, 50 cks.

Bones—
Treport, 106 bgs.

Caustic Soda—
Germany, 6 cks.

Chemicals *(otherwise undescribed)*
Basle, 9 kgs. 1 cs.
Helsingfors, 5 cks.
Mainz, 3 / 5 kgs.
Montreal, 25

Coal Products—
Aniline Oil
Germany, 1 kg. 10 dms. / 1 ck.
Aniline Salt
Germany, 12 cks.
Benzol
Stockholm, 12 cks.
Carbolic Acid
Belgium, 25 cks.
Naphtha
Treport, 10 brls.
Naphthylamine
Germany, 36 cks.
Pitch
Germany, 404 t. 3 c.
Marseilles, 811
Treport, 50

Dextrine—
Barcelona, 20 bgs.

Dried Blood—
France, 58 bgs.

Dyestuffs—
Logwood
Cornwall, 30 cks.

Tannin Extract
Belgium, 2 cks.
France, 19
Germany, 10
Farina—
Bombay, 10 bgs.
Holland, 1 kg.
Gamma Acid—
Germany, 9 cks.
Glue—
Bombay, 1 ck.
Germany, 10
Holland, 31
Glycerine—
Germany, 10 dms.
Pyridine—
Germany, 2 dms.
Salt—
Montreal, 390 t.
St. John, N.B., 800
Sodium Naphthionate—
Germany, 20 cks.
Holland, 15
Sodium Silicate—
Holland, 1 ck.
Toluol—
Germany, 27 dms.
Varnish—
Barcelona, 12 cks.
Zinc Chlorate—
Bombay, 12 cks.

HULL.

Week ending May 20th.

Alkali—
Constantinople, 16 cks.
Stavanger, 110 bls.
Ammonium Sulphate—
Genoa, 704 bgs.
Gothenburg 200
Bleaching Powder—
Odessa, 14 cks.
Caustic Soda—
Harlingen, 10 dms.
Chemicals (*otherwise undescribed*)
Amsterdam, 18 pks.
Antwerp, 3 cks. 14
Christiania, 2
Copenhagen, 7 cs.
Danzig, 44
Drontheim, 20
Genoa, 4 200
Ghent, 8
Gothenburg, 18 13
Hamburg, 34 110
Leghorn, 8
Naples, 20 4
Odessa, 605
Reval, 19
Rotterdam. 1 102
St. Petersburg, 9 39
Stettin, 12 4
Coal Products—
Creosote
New York, 500 cks.
Pitch
Antwerp, 69 t.
Tar
Antwerp, 2 cks.
Bergen, 5
Danzig, 5
Rotterdam, 10
Stavanger, 2
Colours—
Bordeaux, 2 cks.
Cottonseed Oil—
Amsterdam, 8 t. 15 c.
Antwerp. 8 5
Drontheim, 2 3
Dunkirk, 5 3
Hamburg, 25 18
Rotterdam, 26 3
Rouen, 9 5
Dyestuffs (*otherwise undescribed*)
Christiania, 2 cks.
Danzig, 3 cs.
Dunkirk, 70 bls.
Glue—
New York, 53 cks.
Linseed Oil—
Antwerp, 1 t. 5 c.
Christiania, 7 1
Christiansand, 3 4
Constantinople, 1 15
Copenhagen, 18
Drontheim, 9 3
Hamburg, 15 11
Rotterdam, 5 1
Manure—
San Francisco, 60 t.
Paint—
Amsterdam, 3 cks.
Constantinople, 136
Genoa, 240 kgs. 1 cs.
Painters' Colours—
Amsterdam, 3 cks.
Antwerp, 16 40 pks.
Christiania, 5 2 cs. 5 dms.
Constantinople, 40 1 4
Copenhagen, 18 1
Danzig, 5
Drontheim, 27
Ghent, 44
Gothenburg, 8 7 3 pks.
Hamburg, 32 51 8 dms.
Naples, 96 pks.
New York, 85
Odessa, 254
Rotterdam. 107 2 1 dm.
St. Petersburg, 39 2
Stettin, 24 3
Soap—
Amsterdam, 79 cs.
Starch—
Odessa, 400 cs.
Tallow—
Genoa, 177 cks.
Leghorn, 10
Varnish—
Antwerp, 6 cks. 2 cs.
Christiania, 1
Genoa, 2
Ghent, 1
Gothenburg, 1
Rotterdam, 2
Rouen, 2 pks.
St Petersburg, 1 dm.
Waste Salt—
Amsterdam, 20 brls.

GLASGOW.

Week ending May 25th.

Ammonium Sulphate—
Amsterdam, 125 t. 6 c. 1 q.
Arsenic—
New York, £84
Borax—
Amsterdam, £27
Delagoa Bay, 34
Rotterdam, 144
Caoutchouc—
Christiania, £6 4 11s.
Chemicals (*otherwise unenumerated*)
Bombay, £35
Cape Town, 27
Coal Products—
Aniline Dye
Calcutta, £52
Benzine
Bordeaux. £ 02
Benzoline
Rotterdam, £95
Carbolic Acid
Amsterdam, £100
Rotterdam, 100
Creosote Oil
Bordeaux, £2,771 1cs.
Christiania, 6 5
Lisbon, 795
Pitch
Canada, £115
Dieppe, 496 t.
Gothenburg, 260
Tar
Riga £444
Russia, 55
Disinfectants—
Christiania, £3 15s.
Dyestuffs—
Sumac Extract
Belgium, £92 10s.
Portugal, 40 3
Fustic Extract—
Canada, £70
Gutta Percha—
Amsterdam, £10 5s.
Iodine—
Rotterdam, £250
Iron Oxide—
Guayaquil, 9 t. 13 c. 1 q.
Lead Acetate—
Bombay, £33
Lead Nitrate—
Rotterdam, £100
Linseed Oil—
B. Ayres, 16 c. 3 q.
Canada, 9 t. 1 2
Logwood Extract—
Bergen, 2 t. 14 c. 3 q.
Canada, £115 16s.
Portugal, 22 17
Oxalic Acid—
U.S.A., £100
Paint—
Calcutta, £128
Painters' Colours—
B. Ayres, £71
Calcutta, 128
Cape Town, 95
Constantinople, 108
Rotterdam. 58
Paraffin Wax—
Cape Town, £95
Italy, 407
Leghorn, 242
Russia, 108
Potash—
Amsterdam, £163
Rotterdam, 67
Potassium Bicarbonate—
New York, £740
Red Lead—
Rosario, £190
Yokohama, 41
Salammoniac—
Italy, £98
Salt—
Isafjord, 15 t.
Sheep Dip—
B. Ayres, £168
Soap—
E. London, 2 t.
Soap Lyes—
Canada, 1 t. 5 c.
Sodium Arseniate—
Lisbon, 1 t. 19 c. 3 q.
Sodium Bicarbonate—
New York, 4 t. 16 c. 3 q.
Starch—
Lisbon, £60
Rotterdam, 10
Tallow—
Rotterdam, 6 t. 3 c. 2 q.
Tin Crystals—
Lisbon, £37
White Lead—
B. Ayres, £256
Calcutta, 57
Rosario, 34
Transvaal, 41

TYNE.

Week ending May 20th.

Alkali—
Amsterdam, 9 t. 2 c. 1 q.
Antwerp, 5 7 1
Rotterdam, 2 7 1
Alum—
Rotterdam, 15 t. 1 q.
Antimony—
Hamburg, 2 t.
Rotterdam. 7 19 c. 2 q.
Barium Binoxide—
Hamburg, 10 t. 15 c. 3 q.
Rotterdam, 15 5 3
Bleaching Powder—
Amsterdam, 3 t. 6 c 3 q.
Antwerp. 10 1 1
Christiania, 40
Copenhagen, 8 1 3
Gothenburg, 26 6 1
Hamburg, 7 14 3
Rotterdam, 19 15 2
Caustic Soda—
Abo, 4 t. 18 c. 2 q
Antwerp, 14 15 3
Bergen, 1 9
Copenhagen, 6 13 2
Gothenburg, 10 3
Hamburg, 90 3 1
Rotterdam, 43 10 2
Coal Products—
Tar
Hamburg, 1 dm.
Colours—
Rotterdam, 4 c.
Iron Oxide—
Sebastopol, 18 c. 2 q.
Litharge—
Antwerp. 2 t. 14 c. 3 q.
Christiania, 11 2
Gothenburg, 1 2
Magnesia—
Antwerp, 9 c. 3 q.
Hamburg, 5 t. 5
Magnesium Carbonate—
Amsterdam, 12 c.
Manganese—
Antwerp, 2 q.
Manure—
San Francisco, 100 t. 1 q.
Paint—
Antwerp, 3 t.
Bergen, 1 5 c. 3 q.
Christiania, 11
Gothenburg, 2 11
Painters' Colours—
Antwerp, qty.
Hamburg, 2 cks. 4 dms.
Red Lead—
Aalborg, 1 t. 7 c.
Antwerp. 5 3
Christiania, 6 5 3 q
Copenhagen, 9
Constantinople, 1
Hamburg, { 14 14 2 / 19 cks.
Soda—
Amsterdam, 40 t. 3 c.
Christiania, 15
Rotterdam, 20 6
Soda Ash—
Christiania, 5 t. 7 c. 1 q.
Copenhagen, 5 6 2
Gothenburg, 51 5 2
Sodium Hyposulphite—
San Francisco, 20 t. 5 c.
Sodium Sulphate—
Antwerp, 170 t.
Moss, 262
Porsgrund, 380
Sulphur—
Amsterdam, 5 t.
Gothenburg, 50
Tallow—
Rotterdam, 5 t. 4 c. 1 q.
White Lead—
Bergen, 6 c 3 q.

GOOLE.

Week ending May 17th.

Chemicals (*otherwise unascribed*)
Ghent, 4 cks.
Hamburg, 2 10 cs. 21 dms.
Coal Products (*otherwise undes.*)—
Amsterdam, 61 cks.
Antwerp, 1 2 cs.
Boulogne, 9
Ghent, 4
Hamburg, 1
Rotterdam, 19 4
Coal Products—
Pitch
Antwerp, 968 t.
Dunkirk, 211
Dyestuffs (*otherwise unascribed*)
Ghent, 9 cks.
Hamburg, { 1 / 60 bgs.
Manure—
Hamburg, 201 bgs.
Painters' Colours—
Antwerp, 1 ck. 4 cs.
Boulogne, 2
Ghent, 2 dms.
Rotterdam, 8

GRIMSBY.

Week ending May 20th.

Alkali—
Antwerp, 10 cs.
Hamburg, 22
Rotterdam, 5
Ammonium Sulphate—
Hamburg, 200 bgs.
Caoutchouc—
Esbjerg, 2 bs. 3 cs.
Malmo, 1 3
Coal Products (*otherwise undes.*)—
Dieppe, 27 brls. 16 pks.
Hamburg, 4
Painters' Colours—
Antwerp, { 1 kg. / 9 cks.
Rotterdam, 3 [illegible]

PRICES CURRENT.

WEDNESDAY, May 31, 1899

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9 & 8/3		
,, Glacial .. .. ,,	35/-		
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	9
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	0	11½
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	1
Tartaric .. .. ,,	0	1	0
Arsenic, white powdered .. .. nett per ton	19	0	0
Alum, loose lump .. .. ,,	4	5	0
Alumina Sulphate (pure) .. .. ,,	3	15	0
Aluminoferric .. .. ,,	2	2	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2¾
,, = 24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3¼
,, Muriate .. .. per ton	21	0	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/- & 33/-		
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	12	15	0
,, ,, (grey) Hull .. .. ,,	12	10	0
Aniline Oil (pure) .. .. per lb.	0	0	4½
Aniline Salt ,, ... ,,	0	0	4
Antimony .. .. per ton	39	10	0
,, (tartar emetic) .. .. per lb.	0	0	8
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	17	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6 to 65/-		
Bleaching Powder, 35 % .. .. nett ,,	4	5	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6¾
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. .. ,,	17/- to 25/-		
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30% A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	7
,, 50/90 ,, ... ,,	0	0	7¼
Carbolic Acid (crude 60°) .. .. ,,	0	1	11½
,, (crystallised 40°) .. .. .. per lb.	0	0	6¾
,, (liquid 95/97%) .. .. .. per gallon	0	1	0
Creosote (ordinary) .. .. ,,	0	0	3½
,, (filtered for Lucigen light) .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	3	0	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	4	6
Solvent Naphtha, 90% at 160° .. .. .. per gallon	0	0	10
Copper .. .. per ton	76	12	6
,, Sulphate .. .. ,,	26	10	0
,, Oxide (copper scales) .. .. ,,	57	0	0
Glycerine (crude) 80% .. .. ,,	24	0	0
,, (distilled S.G. 1250°) .. .. ,,	48	10	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	2	6
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	15	7	6
,, Litharge Flake (ex ship) .. .. ,,	17	0	0
,, Acetate (white ,,) .. .. ,,	24	0	0
,, ,, (brown ,,) .. .. ,,	18	0	0
,, Carbonate (white lead) pure .. .. .. ,,	18	10	0
,, *Nitrate* .. .. ,,	22	10	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	4	17	6
,, ,, (grey) (ex ship) .. .. ,,	8	0	0
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton	9	10	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	14	15	0
,, Borate .. .. per cwt.	2	0	0
,, Ore, 70% .. .. per ton	3	10	0
Methylated Spirit, 61° O.P .. .. per gallon	0	2	0
Naphtha (Wood), Solvent .. .. ,,	0	2	10
,, ,, Miscible, 60° O.P. .. .. .. ,,	0	3	9
Oils:—			
Cotton-seed .. .. per ton	17	10	0
Linseed .. .. ,,	20	5	0
Stearine .. .. ,,	26	0	0
Phosphorus (Yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	15	0
,, Chlorate .. .. per lb.	0	0	3½
,, Cyanide, 98 % .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) 90 % .. .. per ton	22	0	0
,, ,, ,, 75/80 % .. .. ,,	17	15	0
,, Potash Hydrate Liquid 50 % .. .. .. ,,	11	5	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	2	12	6
,, Prussiate Yellow .. .. per lb.	0	0	8¼
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	0
,, Muriate, 80 % ,, ... ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	4½
Sodium (metal) .. .. per lb.	0	2	6
,, Carb. (refined Soda-ash) 48 % .. nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	5	0
,, ,, (Carb. Soda-ash) 48 % .. .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Soda Crystals) .. .. .. ,, ,, (f.o.r. w'ks.)	2	10	0
,, Acetate (ex-ship) .. .. ,,	12	15	0
,, Arseniate, 45 % .. .. ,,	13	10	0
,, Chlorate .. .. per lb.	0	0	3¼
,, Borate (Borax) .. .. nett per ton	16	0	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton (10 ton lots)	7	12	6
,, ,, (74 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	0	0
,, ,, (60 % Caustic Soda) .. ,, ,, (10 ton lots)	6	0	0
,, ,, (pure liquor 90° Tw.) .. ,, ,, (10 ton lots)	3	10	0
,, ,, 77/78 % powdered (99 % hydrate) ,, (10 ton lots)	11	10	0
,, Bicarbonate (cwt. kegs) .. .. ,,	6	15	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25 % .. .. ,,	15	10	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	9
,, Nitrite, 98 % .. .. per ton	26	0	0
,, Phosphate .. .. ,,	10	7	6
,, Prussiate .. .. per lb.	0	0	6½
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	10	0
,, Stannate, 40 % .. .. per cwt.	3	10	0
,, Sulphate (Salt-cake) .. .. per ton	1	6	6
,, ,, (Glauber's Salts) .. .. .. ,,	1	12	6
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	5	2	6
Strontium Hydrate, 100 % .. .. ,,	9	10	0
Sulphocyanide Ammonium, 95 % .. .. .. per lb.	0	0	5¾
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton	6	15	0
,, (Roll Brimstone) .. .. ,,	6	0	0
,, Brimstone: Best quality .. .. ,,	4	12	6
Superphosphate of Lime (26 %) .. .. ,,	2	10	0
Tallow .. .. ,,	24	0	0
Tin Crystals .. .. per lb.	0	0	7¾
,, English Ingots .. .. per ton	121	0	0
Zinc (Spelter) .. .. ,,	28	10	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	7	10	0
,, Sulphate, Crystal .. .. ,,	7	15	0

THE

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AND

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LATE ADVERTISEMENTS.

TENDER.

BOROUGH OF BURTON-UPON-TRENT.

TAR.

THE Mayor, Aldermen, and Burgesses of the Borough of Burton-upon-Trent, acting by the Council, invite TENDERS for the purchase of the surplus TAR to be produced at their Works during Twelve Months from the end of July next.

Probable quantity of Coal carbonised during the Twelve Months, 30,000 Tons.

The Tar will be delivered free into Contractor's Tank-trucks, on the Gas Works Railway Siding.

Payments—Nett Cash Monthly.

Tenders, sealed and endorsed "Tender for Tar," are to be delivered to me, at or before Ten a.m. on Thursday, the 29th of June inst.

The highest or any Tender will not necessarily be accepted.

F. L. RAMSDEN,
Manager and Engineer.

Gas and Electric Light Works,
Burton-upon-Trent, June 1, 1899.

ANALYTICAL CHEMIST, with good knowledge of Bacteriology, and practical, scientific, and business experience, seeks position with another Analyst or in Works.—Address, "B.C.L.," *Chemical Trade Journal* Office, Manchester.

KIESELGUHR.—Large quantities of extra quality white for Sale. Buyers will be supplied with samples, analysis, and prices on application to David Owen and Son, 41, Exchange Chambers, Liverpool.

Notices.

All communications for the *Chemical Trade Journal* should be addressed, and Cheques and Post Office Orders made payable to—

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NATIONAL TELEPHONE, **3060.**

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Yearly (52 numbers) ..... 12s. 6d.
Half-Yearly (26 numbers) ..... 6s. 6d.
Quarterly (13 numbers) ..... 3s. 6d.

Articles, reports and correspondence on all matters of interest to the Chemical and allied industries, home and foreign, are solicited. Correspondents should condense their matter as much as possible, write on one side only of the paper, and in all cases give their names and addresses, not necessarily for publication. Sketches should be sent on separate sheets.

CURRENT TOPICS.

THE CARE OF CHEMICAL WORKS.

ONCE more Mr. Carpenter gives us his report upon the inspection of alkali and other registered works, and therein he shows that he and his assistants do their work well. They do it well in two ways.

In the first place, though there are six works less in operation than last year, still, 14 more processes have come under inspection, and yet they have kept manufacturers up to the mark, fully maintaining the efficiency of the past. Secondly, this has been done without harassing manufacturers unduly.

Though the average escape of acid vapours is thus practically as low as in former years, Mr. Carpenter gives a few hints as to directions in which improvements may be effected. One of these is the packing of Glover Towers. He throws all the weight of his experience against the not infrequent practice of packing the towers too closely and building the base too low to afford the gases an initial upward momentum. If properly designed, the plant can be worked without any of the escapes which have of late necessitated warnings being given to some works.

At the same time it is a credit to manufacturers that there should have been but two prosecutions in the past year. As it happens both have been allen Lancashire manufacturers, one at Manchester and one at Bolton. One of these was in relation to the condensation of the aqueous vapour in the gases escaping from the saturator, in the manufacture of ammonium sulphate. This "devil water" has long been a source of trouble, and the chief inspector insists upon its being taken off from the gas cooling plant as soon after being condensed as possible—and consequently as hot as possible. Otherwise it becomes heavily charged with sulphuretted hydrogen gas, and when run into the sewers is a source of serious danger to the sewer-men, as well as of inconvenience by escapes up manhole grids.

In many other ways this report is instructive as well as interesting, and we may cite one instance which occurs incidentally through a reference to some correspondence concerning Lunge-Rohrmann Towers being used in two instead of one works in this country. It appears that if only used at two works in the United Kingdom they are now used at 23 works abroad, and soon will be working at 28 manufactories in France, Germany, Denmark, Austria, Italy, Spain, the United States, Buenos Ayres, and Japan. Moreover, 200 towers for condensing hydrochloric acid and recovering nitrous fumes are at work, yet not one of this number is in Great Britain for hydrochloric acid, and only ten for nitrous fumes. It would not be amiss to examine and test the tools our competitors are using.

COKE PROFITS AND PRODUCTS.

The notoriously high prices for coke which have been ruling of late naturally provoke comment upon the profits of coke-makers, and truly with coke at 20s. per ton, delivered to

the furnaces on the Tees-side, there must be a little bit of "fat" with it, seeing that in the former course of events a margin for profit was left at 8s. to 10s. per ton.

Not unnaturally such a condition of things causes coal-owners to contemplate the wisdom of producing coke themselves, but so far coke plants and rumours thereof are not arising like mushrooms. In consequence, a contemporary, devoted to the coal and iron industries, urges the advisability of laying by money to build coking plants, and recommends coke manufacturers to invest a part of their handsome profits in the provision of bye-product recovery plants. In one sense the advice is good; but, of course, we presume that the bye-product business is to be worked for profit too, and if so it will be as well to consider the stability of present prices of bye-products and the effect of a glut upon them. Benzol is weak at 7d. to-day and tottering towards 6½d., under the almost agonising prospects of increased Continental production. What will it descend to if there is an additional and sudden augmentation at home? Sulphate of ammonia at present is at a satisfactory level, and likely to remain there for a reasonable time to come, but despite its strengthened position any marked increased of production would materially weaken this article. In calculating for the future therefore intending coke oven bye-product recoverers had better reckon on sulphate of ammonia at £10 and benzol at—who knows? Shall we say 5d.?

PETROLEUM INDUSTRY OF ONTARIO.

IT is not generally known that the products from oil in Ontario exceed in value all the other mineral products put together. This, however, is a fact which is brought out in the statistics compiled by Mr. Archibald Blue, Director of Mines, for 1897.

According to these the total value of the products manufactured from petroleum was $1,777,591., as compared with a total value of all other mineral products of $1,639,357., a difference in favour of the former of $138,234. Adding together the values of oil products and natural gas, it gives a total of $2,086,039, which would make an excess in value over the rest of the mineral products of $446,682. It will thus be seen that as a wealth-producer the oil industry stands at the top of the list—a fact which should be given due weight in considering what treatment should be dealt out to the industry. The facts, however, cannot be used as a recommendation of any particular company. That should be perfectly clear.

Taking up the statistics in detail, it will be found that the quantity and value of the products of petroleum were in 1897 as follow:—

	Imp gallons.	Value.
Illuminating oil	10,891,337	$1,131,083
Lubricating oil	1,959,810	199,755
Benzine and naphtha	949,341	77,340
Gas and fuel oils and tar	8,021,633	281,035
Paraffin wax and candles	2,139,278*	88,378
Total		$1,777,591

*Pounds.

The quantity and value of all other products were:—

	Net tons.	Value.
Natural gas	—	$308,448
Calcium Carbide	574	34,440
Salt	54,686	249,880
Gypsum, and products of	400	8,500
Pig iron	24,011	288,127
Nickel	1,999	359,651
Copper	2,750	200,067
Gold	11,412*	190,244
Total		$1,639,357

* Ounces.

From inquiries made by the *Toronto Globe* it would seem that the oil-producers attach the greatest possible importance to permanency of the oil duties, and one and all express the hope that some assurance will be given as to the maintenance of the tariff in its present shape. There is also a desire that the Government should take action so as to prevent discrimination on the part of the railway companies. None of the producers deny that the control of the refining interest by the Standard Company gives that gigantic organisation tremendous power; but some of the oil men say that if the company abuses its position and seeks to oppress the producers they will obtain relief by starting another refinery. This is perhaps easier said than done; but, at all events, such a movement would have the support of public opinion in the province.

THE MERSEY AND IRWELL JOINT COMMITTEE.

REFERENCES TO THE LATE CLERK.

A meeting of the Mersey and Irwell Joint Committee was held on Monday afternoon, in the offices, Mosley Street, Manchester, the chair being occupied by Mr. C. Brierley, of Bury.

Mr. J. Brierley spoke of the death of their clerk, Mr. F. C. Hulton, as an irreparable loss not only to that and other bodies but to the county generally. He had been with the Committee since its formation, and it was owing to his sound advice and skilful management that its work had been so successful. He moved that the Committee should forward an expression of its regret and sympathy to the family of their late clerk.

Mr. T. W. Killick, who seconded, said it was due more to the efforts of Mr. Hulton than to any other person that the Committee was formed. They would miss his services, and the county would be the worse for the loss of his knowledge of local government.

The Chairman added a few sympathetic words, and the motion was carried.

Mr. W. H. Wilson was appointed acting clerk, and it was decided to leave the appointment of a successor in the hands of a sub-committee.

It was announced that Councillor F. Brocklehurst had been appointed by the Manchester City Council as its representative on the Committee in place of Alderman Gibson, who had resigned. Mr. Brocklehurst was elected to the Consulting, Sub, and Finance Committees.

It was announced that Councillor Lambert had resigned as a representative of the Manchester Corporation.

Reference was made to a sample of a bad effluent taken at Salford, and Alderman W. Robinson, of the Salford Town Council, said it was proposed to supply a record of daily tests in future.

It was resolved to take action against the Chadderton Urban Council for delay in the construction of intercepting sewers and the coupling up of the sewage with the outfall works.

LEAD POISONING CASE IN THE POTTERIES.

AN inquest was held at the Meir, near Longton, this week, by Mr. T. B. Cull, the coroner for the Uttoxeter division of Staffordshire, touching the death of Emily Tranter, 20, of Caroline-street, the Meir, alleged to have been caused by lead poisoning. Mr. J. H. Walmsley, Her Majesty's Inspector of Factories, was present.

The deceased's mother stated that for the past ten months the girl had been employed as a majolica paintress at the Malkin Tile Company's pottery. She had for three years previously been engaged in enamelling at Messrs. Redfern and Drakeford's, at Longton. Her health appeared to have been good until Tuesday last week, when on returning from a walk in the evening she complained of feeling very ill. Dr. Nicholls was called in. The girl died on Friday morning. Emily (a sister stated) was careful at her work, and showed none of the ordinary symptoms of lead poisoning. This statement was endorsed by the manager of the works, who added that the girl worked in a new building, which was well ventilated and contained proper lavatories and mess-rooms.

Dr. Nicholls said he had attended the girl two or three times during the past few years for indigestion. He had at that time no suspicion that she was suffering from lead poisoning. When he saw her on Tuesday she was in great pain, and showed all the symptoms of colic. He ascertained that for about a fortnight she had been feeling sick, and had not been able to take her food properly. She had been told during that time that she was losing her colour, and she laughingly replied that she supposed it was her work. He had no dobbt that lead poisoning was the cause of death.

The Coroner commented upon the difference in the evidence given by the deceased's relatives regarding the girl's health and the statements made to the doctor at the time of the illness. He said it was for the jury to form their own opinion as to whether the relatives had tried to keep anything back. He did not know why they should have done so, but he had met with cases where there seemed to be a sort of shyness, and where relatives tried to keep little things back

The jury returned a verdict of death from lead poisoning.

ANOTHER AMERICAN COMBINE.—An electrical lead-reducing company, comprising various enterprises has been formed at New York, with a capital of twelve million dollars.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Manufacture of Black Colouring Matters. W. H. Claus and A. Rée. 10,709. May 23

Storage Batteries. E. L. Lobdell. 10,744. May 23.

Improvements in the Chlorination of Ore Tailings and the like. E. H. Sturge. 10,756. May 23.

Improvements in the Manufacture of Sulphuric Acid. A. J. Boult. 10,757. May 23

Improvements in Devulcanising Caoutchouc and similar Materials. A. E. J. V. J. Theilgaard. 10,821. May 23.

Improvements in Devulcanising Caoutchouc and similar Materials. A. E J V. J. Theilgaard. 10,822. May 23.

Improvements in the Extraction of Zinc. T. Ryan and N. Hughes. 10,859. May 24.

Baryt-matches. A. Lagerquist. 10,868. May 24.

Packing Paints, Oils, Drugs, Chemicals, and other Goods. H. Okell. 10,919. May 25.

Apparatus for Applying Paint. J. F. Redman. 10,970. May 25.

Evaporator Apparatuses for Sugar, Soaps, Fatty Substances, and the like. L. Riviere. 11,018. May 26.

Improvements in Smoke-consuming Devices. T. Lowe. 11,029. May 26.

Improvements in the Manufacture of Calcium and other Carbides. F. H. Bowman and A. R. Dawson. 11,054. May 26.

Process of Improving Alcoholic Liquors. J. T. Knowles. 11,107. May 27.

Apparatus for Concentrating or Drying Liquid or Semi-liquid Substances by Evaporation. J. Mecredy. 11,124. May 27.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Tank Waggon for Liquefied Gases, especially Carbonic Acid. I. Qurin. 20, Deutscher Ring, Cologne, Prussia. Eng. Pat 12,501. June 3, 1898.

A series of steel tubes or flasks are disposed on a suitable truck-framing, in much the same way as the tubes in a Babcock boiler. The outlets are naturally at the lower end, and the shoulder of the flask on the under side is flattened, so as to present a continuous plane, which ensures perfect draining-out when emptying or after cleaning. Heating coils are provided under the tubes, and in the drawing-off chamber to prevent the contents freezing while being discharged. There are four figures.

Improvements in Apparatus for Reducing Litharge and other Lead Oxides to Sub-oxide. G. Bischof, Hythe-rd., Willesden Junction, London. Eng. Pat. 13,207. June 13, 1898.

A vertical cylinder is provided with a jacket in which gas is burned to heat the contents to about 275°C. The lower portion of the cylinder tapers and ends in a weighted lever discharging valve. This lower portion is provided with a cooling jacket. An axial shaft revolves within the cylinder, carrying plain stirring blades in the cooled end and helical blades in the heated end. The mouth of the cylinder is closed, and through the cover, on one side, the shoot of the feed hopper projects downwards for some distance, on the other side is an outlet pipe for the gases given off during the reaction. The cylinder is charged with litharge, heated, and water gas free from sulphur compounds introduced where the gas-jacket begins. The helical blades lift and keep the litharge above the end of the shoot and so seal it, but do not lift it enough to choke the gas outlet, whence dust, oxygen, etc., pass to separators. There are two figures. An ingenious register on the water gas feed pipe automatically indicates if the gas is passing, or whether the litharge has choked in the cylinder and become impervious.

Improvements in the Treatment of Wash Liquors from Wool and other Animal Fibre to Recover the Grease and Potash therefrom. J. Smith and Sons, Ltd., Field Head Mills, Bradford, Yorks, and W. Leach, of the same address. Eng. Pat. 15,131. July 9, 1898.

The difficulty of wholly separating the grease from the liquors is well known. It is, therefore, proposed to concentrate the sud-liquors from the wash bowl until there is a more marked difference between the density of the wool grease and the soapy potash solution, and then separating the two in a centrifugal. The separated materials are finally purified to yield lanoline and potash. There are three figures illustrating the necessary apparatus.

Improved Apparatus for the Manufacture of Resinous Soap. F Arledter, 28, Queen-street, London, E.C. Eng. Pat. 2,822. Feb. 8, 1899.

This apparatus is for the manufacture of the soap described in patent 22,862, 1897 (*C.T.J.* 603, p. 369). It consists of a vertical boiler, which is partially steam-jacketted and fitted with a false bottom and a straining grid. When the soap is properly boiled it is blown through a steam-jacketted asbestos or slagwool filter into storage tanks. There are two figures. The charging cover on the boiler is of a special section, which it is claimed gives a steam-tight joint without any packing.

Improvements in or Relating to Saturators for Ammonium Sulphate, Dye Vats, Tanks, Baths, and similar Receptacles for Acids. F. H. Lowlett, 79, Wellington-street, Leicester. Eng. Pat. 5,631. March 15, 1899.

The tanks, &c., are built up of lead-faced iron plates, the edges of which are bent outwards at right angles, to enable the sections to be bolted together. At the corners, however, the edges are obviously bent to an angle of 45° and bolted as usual. The V-shaped recesses at the joints are filled up flush with the surface of the the plates by burning in lead. There are four figures.

Improvements in the Production of Iron Oxide. W. S Rock, Craig Tarra, Saumarez, St. Clement's, Jersey. Eng. Pat. 26,391. Dec. 13, 1898.

Sea water is allowed to percolate through a vessel charged with metallic iron and lumps of graphite or copper, which form a galvanic couple. Oxide, and sulphur compounds, of iron are formed, which are removed by washing, and roasted to oxidise the sulphur compounds. There are five figures showing how the percolation may be achieved.

Improvements in Methods and Apparatus for the Manufacture of Calcium Carbide. H. Maxim, 219, West 34th-street, New York, U.S.A. Eng. Pat. 25,655. Dec. 5, 1898.

This is an improved form of a continuous electric furnace. A poly-phase current is used, with three electrodes. These are disposed horizontally, and are capable of being moved backwards and forwards, automatically, by a motor controlled by the variations of the current-resistance. The electrodes are situated above an endless plate-belt or carrier, which forms the bottom of the furnace, and passes the charge from the hopper end of the furnace to the arc zone. There are seven figures.

Improvements in the Manufacture of Sulphur Trioxide (Sulphuric Anhydride). O. Imray, Chancery-lane, W.C. (communicated by the Farbwerke vormals Meister Lucius and Brüning, Hoechst a/Maine, Germany). Eng. Pat. 14,728. July 4, 1898.

This patent refers to a modification of the process of preparing sulphur trioxide by passing heated sulphur dioxide and oxygen over some contact body, and using the heat of the reaction, as described in patent 6057/98 (*C.T.J.* 593, p. 211). It consists in introducing superheated steam into the mixed gases immediately before or after reaching the contact body. An increased yield of sulphuric acid results from thermo-chemical reasons, which are fully described.

EXPORTS OF PETROLEUM FROM U.S.A.

THE Chief of the Bureau of Statistics at Washington gives the following returns of the exports of petroleum and petroleum products for March. The total shipments were 85,273,703 gallons, compared with 85,944,541 gallons in 1898. The total for the 9 months ending February, 1899, were 696,160,474 gallons, against 766,020,074 gallons in the same period of 1898. The details of the shipments are as follows:—

			CRUDE PETROLEUM.	Gallons.
Total,	March,	1899	.....	14,432,690
,,	,,	1898	.....	10,893,978
			NAPHTHAS.	
Total,	March,	1899	.....	906,233
,,	,,	1898	.....	721,251
			ILLUMINATING.	
Total,	March,	1899	.....	61,264,672
,,	,,	1898	.....	67,168,073
			LUBRICATING AND PARAFFIN.	
Total,	March,	1899	.....	6,120,708
,,	,,	1898	.....	4,993,703
			RESIDUUM.	
Total,	March,	1899	.....	2,549,400
,,	,,	1898	.....	2,167,536

Our Book Shelf.

Dictionary of Electrical Engineering and Chemical Terms. By P. Heyne. 209 pp. London: H. Grevel and Co., 1899. (5s.)

This dictionary gives the English, Spanish, and German equivalents for the technical terms used in machine construction, the foundry, metallurgy, and chemistry. The words are given in parallel columns. The complete dictionary consists of three volumes: I. German-English-Spanish; II. English-Spanish-German, and III. Spanish-German-English. It is got up in a handy form, and is clearly printed. It is brought up-to-date, carbides being included, but like most works of this nature there is ample room for revision. Ordinary chemical terms are for the most part easily interpreted, but such terms as bleaching powder and corrosive sublimate find no place in the dictionary. Mistakes in spelling are frequent and occasionally important. For instance, we thought the numerous compounded words associated with "eccentrics," were omitted entirely in the English-Spanish-German section, but we chanced upon them later at the end of the e's under "excentric." In the same way witherite (native barium carbonate) is lost to anyone consulting this dictionary through being spelt whiterite. If slips of a similar nature are as plentiful in the Spanish and German sections the trustworthiness of an otherwise useful work has been much impaired by careless editing. The preface to the book is not wholly devoid of humour, for the author informs us, in all solemnity, that "the dictionary is arranged in alphabetical order." It would not be a dictionary were it otherwise.

Fortschritte de Angewandten Elektrochemie im 1898. By Dr. F. Peters; pp 412, including index; 63 illustrations. Stuttgart: A. Bergsträsser. 1899. (6 marks.)

This useful work is neatly got up in paper covers. It reviews the year's progress in primary and secondary batteries. This is followed by notes on inorganic and organic electro-chemical methods and processes. Under the former heading there is an interesting chapter on the manufacture of calcium carbide and acetylene generators. The book concludes with chapters on apparatus, pyro-electrochemistry, and a record of current electro-chemical literature. The index is supplemented with a list of English and foreign patents relevant to the subject.

The Chemical and Biological Analysis of Water. By T H. Pearmain and C. G. Moor; pp. 172, with index. Illustrated. London: Baillière, Tindall, and Cox. 1899. (5s. net.)

This work is the second part of the authors' series on "The Analysis of Food and Drugs." It is printed in bold, readable type; but there is very little that is fresh in the text. The section on microscopic examination is illustrated by original drawings, but many are new drawings of very old friends. The contribution to the bacteriological examination of water is disappointing. We should like to have seen some of the energy spent on original drawings which are lavished upon the detection of suspended matter, directed to the preparation of at least one drawing for this important section. The rest of the book is made up of descriptions of the usual methods for estimating the impurities in water, and determining the chemical factors upon which a judgment of purity is generally based. It finishes with a number of analyses of well-advertised mineral waters, which are reprinted with permission from the "Medical Press."

Commercial Organic Analysis. By A. H. Allen. (Revised by H. Leffmann.) Vol. II, Part I., 3rd Edition. 387 pp., including index. Illustrated. London: J. and A. Churchill. 1899. (14s.)

The revision of the second volume of this familiar, standard work, has been hastened, not to say hurried, by the necessity of preventing the appearance of unauthorised reprints, but all the same the revision has been most satisfactory as regards completeness. By the author's advice the volume has now been divided into two parts, the first of which is under notice. It deals with the fixed oils, fats and waxes, glycerol, nitro-glycerine and allied explosives. Among the more important additions are descriptions of the bromine thermal method, the determination of glycerol, tests for the oxidation of oils, and official methods for examining dynamite and smokeless powders. In many other directions, the work has been brought into close touch with the extensive advances of recent years. The book has been revised and printed in America, the ink, by the way, approaching more closely to sepia than black. It is pleasant to the eye, however. Out of deference to Mr. Allen's avowed objection to the revised spelling of the American Association for the advancement of science, this "revised" method has not been followed (save in one or two accidental cases). We are grateful to Mr. Leffmann for his courtesy, and to Mr. Allen for his merciful goodness.

SOCIETY OF CHEMICAL INDUSTRY.

NOTTINGHAM SECTION.

THE final meeting of the session was held on the 31st of May, at the George Hotel, Nottingham, Mr. J. O'Sullivan being in the chair. There was a good attendance including Dr. Kipping, F R S., Dr. Sudborough, Mr. J. M. C. Paton, Mr. J D. Ratcliff (Birmingham), &c.

Mr. L. Archbutt, F.I.C., contributed a short communication on "New Analytical Methods," in which he described a process for the estimation of nickel and steel. This process was perfected in the laboratory of the Midvale Steel Co. although it did not actually originate there. It depends on the property possessed by ether of dissolving ferric chloride If ether be added to a solution containing the two salts and the mixture well shaken, on standing, the ether will rise to the top bringing with it the ferric chloride. The nickel salt will remain in the bottom solution which will contain a trace of iron. By repeating the process the iron can be completely removed and the nickel present ascertained by electrolysis. The apparatus for effecting this was exhibited.

An interesting discussion followed in which the chairman, Dr. Kipping and others took part.

Mr. Golding thought the property of ether, described by Mr. Archbutt, might possibly become useful in the separation of iron from basic slag in the course of an analysis.

Dr. Sudborough said that the method had been adversely criticised in the journal of the Chemical Society last year, as not being accurate.

Mr. O'Sullivan (the chairman) mentioned that ether was also a solvent of salicylic acid, but he had never been able by that method to completely separate the acids from solutions containing it.

Mr. Archbutt, in reply, said he had found the method to yield more accurate results than those usually employed. He hoped at some future time to be able to bring figures before the society which would prove its value.

Mr. J. T. Wood exhibited a set of apparatus for "The Cultivation of Bacteria on a large scale." In Mr. Wood's unavoidable absence Mr. Golding explained that the pure culture is first developed in a test tube. It is then introduced with proper precautions into a Pasteur flask, whence in due time it is transferred into a Carlsberg vessel, containing the necessary amount of nutrient medium. From this vessel the liquid containing the culture can be tapped for industrial purposes. The various precautions adopted to prevent contamination were explained, especially those for the admission of air into the vessel which Mr. Golding said need not necessarily be filtered in the ordinary sense *i.e.*, abestos or cotton wool. Convolutions at the admission end of the tube are sufficient to ensure the air entering the vessel in a sterile condition.

A discussion followed. Mr. Carulla presumed that time would be an element in the success of such a method of filtration. Would not the convolutions become foul if left long enough, and so vitiate the air admitted?

Mr. Ratcliff said that a beaker reversed over the neck of an open bottle so that the rim of the beaker touched the bottle all round would, with proper precautions when putting on, keep a solution in the bottle sterile for a long time. Of course the longer it was left the greater the chance of the introduction of bacteria by an upward current of air.

Mr. John Golding then read a paper on "Sugar as an Agent in Nitrogen Fixation and an aid to the Growth of Plants." The author gave an account of experiments designed to find out if as sugar in the plant supplies the energy necessary for the bacteroids of the root nodules to assimilate nitrogen an application of sugar to the soil would assist this assimilation. The results were quite confirmatory of this anticipation, as was evident from a number of photographs of plants grown with—and without—the addition of sugar. Mr. Golding pointed out that the importance of the subject from a practical point of view was "the growing demand for fruit, vegetables, and flowers out of season making *any substance* which enabled plants under glass to grow to perfection with a minimum of sunlight invaluable to the nurseryman and market-gardener."

Mr. Archbutt expressed doubt as to fruit properly ripening without sunlight. He was able to grow very fine tomatoes under glass with deficient sunlight, but they would not ripen.

Mr. Paton mentioned that at Greenock the sweepings from the yards of sugar refineries were in great demand for gardens, which seemed to confirm Mr. Golding's deductions. No doubt there would be some horse dung in these sweepings but he believed the sugar was regarded as the valuable constituent.

Votes of thanks were accorded to the readers of the papers, and thus a very successful session terminated.

Reports of Companies.

KYNOCH, LTD.

The report of the directors for the year ended March 31 last states the directors present the balance-sheet as on March 31, 1899, showing a net profit amounting to £51,006. 9s. 11d. To this has to be added the sum of £8,444. 10s. 4d. brought forward from last year, making a total of £59,451. 0s. 3d. available for dividend. An interim dividend of 2½ per cent. on the preference shares, amounting to £7,375., was paid in December last, and the directors' fees will absorb another £5,000. The directors now recommend that a final dividend of 2½ per cent. be paid on the preference shares, making 5 per cent. for the year, and that a dividend of 10 per cent. be paid on the ordinary shares (both free of income tax), and that the balance of £14,701. 0s. 3d. be carried forward. During the past year the continued increase in the company's sales, combined with the large capital outlay, required principally by the Thames and Witton Works, convinced the directors that an addition to the company's share capital was needed, and they were further convinced that they could rely on the profit-earning capacity of the new departures to pay dividends on a reasonable increase of share capital. They, therefore, issued 5,000 preference shares of £10. each at a premium of £2. per share. These were offered to the shareholders, and the premium obtained, £10,000. less the expenses incurred in connection with the increase of capital, carried to the reserve fund, which now stands at £69,566. 0s. 8d. At that time an even larger addition to capital appeared to be required; but the directors were satisfied that no large amounts would be needed for works or plant during the coming year, and they anticipated a considerable release of capital now engaged under the heads of stock and debtors. Under these circumstances, they determined to wait events before pledging the company to any larger addition to the share capital than the 5,000 preference shares, which represented an increased charge of £2,500. per annum. The works have been fully engaged during the year, orders for the United States of America and other Governments adding to the employment usually provided by the British Government's requirements. The sporting season was not generally considered a good one; but the unqualified success of the Kynoch smokeless sporting powder made the company's business highly satisfactory in this department. In smokeless powder, as in some other businesses, a very large sale renders possible the employment of first-class experts, whether as chemists or as engineers, and the constant introduction of the latest and best machinery, these being expenses which, in a small business, eat up the profits. In this way the Kynoch Company have taken advantage of their immense business in cordite—the largest in the world—to apply to their sporting smokeless powder the same tests of materials and output that they are accustomed to with their military powders. The Kynoch Estate Company was formed during the year with a capital of £30,000., and the shares, with the exception of a few reserved for local application or special purposes, were offered to the Kynoch shareholders at par, and taken up by them. They now stand at a small premium. This company will assist the Kynoch Company by providing some of the house accommodation needed in the neighbourhood of their Thames Works, and by the manufacture of bricks, which are at present very dear and scarce in that part of Essex. In addition to the house accommodation the Estate Company are providing, the Kynoch Company have built on their own land 27 workmen's dwellings of neat and substantial design, with proper sanitary conveniences, and with a supply of pure water. The directors consider that it will be right to provide also school accommodation for the children of the workpeople living on the company's land and in the few houses immediately adjoining. As regards the cost of the building and the school fittings, these will have to be borne by the company; but it is anticipated that the annual receipts from grant earned will nearly, if not quite, meet the annual expenditure.

LAUTARO NITRATE CO, LTD.

The report of the directors of the Lautaro Nitrate Co. for the past year states that after writing off the customary expenses, etc., making the necessary provision for the debenture service and allowing for depreciation of grounds, plant, etc., the net profit is £17,509., to which must be added the balance brought forward from 1897, £1,728., making together £19,238. An interim dividend of 1s. 6d. per share was paid on January 3rd last, leaving available £10,988., out of which it is proposed to pay a final dividend of 1s. 6d. per share, making 3 per cent. for the year, and leaving to carry forward to 1899, £2,738. Further new works tending to cheapen production have had to be undertaken in the Laurato oficina during the year, and their cost has been met to the extent of £2,570., by payment out of the year's profits, and to the extent of the balance—£1,501.—by a payment out of reserve account, from which there has also been transferred £2,498. to extinguish the old debit balance in improvements account. The directors have continued to support the efforts made to form a combination which would reasonably restrict production, stop competition in sales and restore confidence to the trade generally; but they regret once more to say that nothing practical has so far come out of the many schemes discussed. It would appear, however, that production is not likely to increase much while prices remain at their present low level; consumption, however, is still increasing, and if this state of things continues the business may gradually get on a sounder footing, and certainly would do so if the present competition in sales could be done away with.

SAN SEBASTIAN NITRATE CO., LTD.

The report of the directors to December 31st last states that the gross profit for the year amounts to £6,236., from which has to be deducted London expenses £972, loss in exchange £1,864., and balance of income-tax £40, leaving £3,358. to be carried to the balance sheet. Adding this to the previous balance of £3,486., the total to the credit of profit and loss account amounts to £6,844., out of which the directors propose paying a dividend of 2s. per share (less tax), leaving £3,969. to be carried forward to the next account. Taking into consideration the extremely low prices current throughout the whole of 1868, as well as the fact that production at Sacramento has been limited to the smallest quantity compatible with economical working, the directors consider that the results obtained under very trying circumstances are decidedly encouraging, as they show that with fair prices ruling for nitrate, good profits would be made by the company. The maquina has recently been thoroughly overhauled, and the manager reports that the plant generally is now in a better state than it has been in for some years past.

PRIMITIVA NITRATE CO., LTD.

The directors, in their report for the twelve months ended December 31st last, state that the accounts show a net loss of £5,681. No nitrate has been made during the year, and the loss shown is on realisation of nitrate stocks valued at cost in the last balance-sheet, depreciation on stores, stoppage expenses, etc During the year the directors have effected the sale of a piece of ground which could not be conveniently worked by the oficina, owing to its distance from the machinery, for the sum of £7,500.

DIVIDEND.

YOUNG'S PARAFFIN LIGHT AND MINERAL OIL.—The accounts for the year ended April, 1899, after providing for working expenses and debenture interest, show a debit of £17,752.

CHEMICAL AND MINERAL TRADE OF SPAIN.

CADIZ, HUELVA, AND SEVILLE.

THERE can be little doubt that the war between Spain and the United States had a damaging effect on the trade of Cadiz during the year 1898. Still the diminution in the imports and exports does not appear to have been as great as would naturally have been expected, and, taking into consideration the increase in the import of ammunition, powder, coal, etc., which were chiefly brought for the use of the Spanish war vessels, the total value of the import and export trade of Cadiz during the year did not fall far short of that in 1897.

Salt.—The average quantity of salt which is extracted from the "salinas" round Cadiz is from 200,000 to 250,000 tons per annum. The price of salt f.o.b. during 1898 was about the same as in the two previous years—viz., 24 pesetas per last (2½ tons). The quantity exported in 1898 was much less than in 1897, and in spite of the superior quality of the Cadiz salt, buyers apparently prefer to go to other markets where prices are lower, such as in Portugal and Italy.

The following table shows the amount of salt, with destination, exported from Cadiz during the years 1897 and 1898:—

Destination	Quantity. 1897. Lasts.	1898. Lasts.
North Europe	7,439	4,151½
United States of America	736	..
Newfoundland	15,764	13,051
River Plate	45,775	38,961
Brazil	6,645	7,333
Various	1,869	1,410
Total to foreign countries	78,228	64,906½
Exported to Spanish ports	13,210	12,201½
Total	91,439	77,108½

Manganese.—In the district of Ronda, not far from Algeciras, a new mine of manganese ore has recently been discovered, and is in course of being worked. When it is in full working order the greater portion of its products will no doubt be shipped to England *viâ* the port of Algeciras. This is only one of the many mineral deposits lying between Bobadilla and Algeciras, which at the present time are not worked, but which it might prove profitable to some enterprising company to properly prospect and test.

Imports into Huelva from Great Britain show an increase, although small, in cement, coals and coke, pitch and tar, mineral oil, cast and wrought iron goods, locomotives, machinery and railway material, whilst naphtha oil, pig iron, and iron and steel manufactures have greatly decreased.

The following is a comparative statement of the exports from Huelva to various countries in 1898:—

To	Articles.	Quantity. Kilos.
Great Britain..	Cupreous sulphur ore pyrites ..	512,911,460
	,, ,, ,, smalls	4,765,880
	Sulphate of copper	85,000
	Iron pyrites	44,924,870
	Lead ore	108,980
	Mercury	869,200
	Manganese..	4,179,090
France ..	..Cupreous sulphur ore pyrites ..	413,390
	,, ,, ,, smalls	3,192,610
	Sulphate of copper	1,050,383
	Iron pyrites	6,844,370
	Lead ore	251,714
	Manganese..	5,842,520
Germany	..Cupreous sulphur ore pyrites ..	86,622,880
	,, ,, ,, smalls	13,313,610
	Sulphate of copper	107,500
	Iron pyrites	1,887,420
	,, ore	5,294,040
Belgium..	..Cupreous sulphur ore pyrites ..	9,449,690
	,, ,, ,, smalls	4,055,320
	Sulphate of copper	44,277
	Lead ore	45,200
	Manganese..	105,415,420

At Seville the exports of copper pyrites have largely increased, doubtless because the high rate of exchange diminished the sterling cost of expenses in the country, and the rise in copper allowed a poor mineral to be shipped to a profit.

The following figures give an idea of the chief mineral exports :—

Articles	1898.		1897.	
	Quantity.	Value.	Quantity.	Value.
	Tons	£	Tons	£
Iron ore	381,593	157,407	350,446	144,479
Copper pyrites ..	18,939	37,870	5,259	10 500
Lead ore	9,188	91,880	8,064	80,640
Lead	31,471	314 710	25,580	255,800
Quicksilver.. ..	1,025	205,000	1,230	246,000

Copper Sulphate for Charlock.—An experiment which is creating an unusually large amount of interest, is being made during the present season. It has recently been discovered that by spraying charlock or wild mustard with a solution of sulphate of iron or sulphate of copper, they may be destroyed, while the corn among which they are growing, as well as the seeds, are uninjured. The Agricultural Department of the Yorkshire College, on behalf of the East and West Ridings Joint Agricultural Council, are at present engaged in giving demonstrations of this new method of eradicating this well-known pest. Machines of two different types are being used in the demonstrations, the object being to show what can be done in order that the farmers may ascertain the value of the system and the relative value of the machines before purchasing. Up to the present time, about twelve demonstrations have been given in different parts of the Ridings, each demonstration covering from five to fifteen acres of land. The experiment is one that requires to be carried out with caution, and as yet the exact strength and quantities have not been determined with accuracy. Later in the season a report on the work will be issued to farmers, but in the meantime, those having fields badly infested with charlock, and who wish to purchase a machine, should communicate with the head of the Agricultural Department of the Yorkshire College, Leeds, from whom they will be able to obtain particulars that will enable them to do the work with safety to the crop. Arrangements may be made whereby demonstrations may be given to farmers' clubs *on certain conditions*, particulars of which may be obtained from *Professor Campbell, Yorkshire College, Leeds.*

NOTES ON AMERICAN CHEMICAL TRADE.

The American Alkali Company, recently incorporated to employ the "Rhodin" process for the electrolytic manufacture of heavy chemicals (*C. T. J.* No. 927, p. 649) is now engaged in importing the necessary apparatus from Manchester, England. Of the £120,000. share capital the Commercial Development Company of Great Britain, from whom the patent rights to the process have been purchased, will receive 240,000 shares. President Gibbs, over his signature to the stockholders, states: "We have arranged for the location of our works at Sault Ste. Marie. We have contracted for such amount of power as we shall require. We shall have power at 10 dols. per h. p. per annum; lime at the cost of quarrying and conversion, and salt at the cost of pumping into our works."

* * *

The property of the Globe Phosphate Company at Columbia, S.C., is now owned by the Virginia-Carolina Chemical Company. The price was £10,000. It is stated that the Virginia-Carolina Chemical Company will erect a plant of double the capacity of the old mill, will put in new machinery and generally enlarge its business.

* * *

The American Cream Tartar Company has been incorporated to refine cream tartar and bicarbonate of soda. Capital, £35,000., all subscribed. Incorporated by C. de Guigne, president; Daniel Meyer, vice-president; George F. Volkmann, second vice-president; August Schilling and John H. Wheeler, directors, and besides by G. de Latour and John Stauffer. This company absorbs the cream of tartar factory at Philadelphia operated by the Stauffer Chemical Company.

* * *

The Electrolytic Chemical Company has recently been incorporated with a capital of £1,000,000., under South Dakota laws, to work the electrolytic chemical process of Prof. I. T. Roberts, of the University of Illinois. This company intends to make caustic soda, bleaching powder, hydrochloric acid and chlorine.

* * *

The American Agricultural Chem. Co. has been formed with £8,000,000. capital, divided into £4,000,000. cumulative preferred 6% stock and £4,000,000. common stock, to include the following fertilizer plants: Alexander Fertilizer and Chemical Co., Alexandria, Va; H. J. Baker and Brother, Brooklyn, N. Y.; Bradley Fertilizer Co., Boston, Mass., and Los Angeles, Cal.; Chemical Co., of Canton, Baltimore, Md.; the Cleveland Dryer Co., Cleveland, O.; Cumberland Bone Phosphate Co., Boothbay Harbour, Me; Crocker Fertilizer Co., Buffalo, N. Y.; Detrick Fertilizer and Chemical Co., Baltimore, Md.; Jarecki Chemical Co., Sandusky, O.; Lazaretto Guano Co, Baltimore, Md.; Liebig Manufacturing Co., Carteret, N. J., and Wilmington, Del.; Lister's Agricultural Chemical Works, Newark, N. J.; Maryland Fertilizing and Manufacturing Co., Baltimore, Md.; Michigan Carbon Works, Detroit, Mich.; Milsom Rendering and Fertilizer Co., Buffalo, N. Y.; Northwestern Fertilizing Co,, Chicago, Ill.; Preston Fertilizer Co., Brooklyn, N. Y.; the Quinnipiac Co., Boston, Mass.; Read Fertilizer Co., Brooklyn, N. Y.; Tygert-Allan Fertilizer Co., Philadelphia, Pa.; Williams and Clark Fertilizer Co., Carteret, N. J.; Zell Guano Co., Baltimore, Md. Several of the constituent companies are also large producers of boneblack, sulphuric, muriatic, and phosphoric acid, ammonia, compounds, sulphate of potash, sulphate of soda and animal oils. The total net assets of the subordinate companies is put at $13,164,287. John F. Gibbons, of New York, has been selected as president, and Robert S. Bradley, of Boston, and William H. Grafflin, of Baltimore, Md., have been selected as vice-presidents of the new company.

Fire Tests.—The British Fire Prevention Committee is shewing increased activity at its Testing Station, and a most important series of investigations is again in hand. Among these Tests is one with a floor of steel joists and concrete filling, the concrete being of the aggregate lately allowed by the L.C.C. Another floor under investigation is a solid timber floor, a third floor by the Columbian Fire Proofing Co., U.S.A., which is to be subjected to very high temperatures. Various forms of doors of wood, armoured wood and iron will be under investigation, also silicate partitions and ceilings by Messrs. Anderson and Messrs. Broadbent, some patented partitions, and plasters, some plain electro-glazed windows by the Luxfer Prism Syndicate, and lastly some of the non flammable materials. A set of ordinary partitions have also been recently tested. Nearly all the great public authorities are now represented at the Committee's Tests, and at the last Test representatives attended from the leading insurance companies by special invitation. Owing to the numerous applications to visit the station, the executive has asked us to remind would-be visitors that the attendance is still strictly limited to the members by rotation and a few special guests.

Trade Notes.

COLLAPSE OF THE PROPOSED "SALT OFFICE, LTD."—The scheme as announced in the *Journal* in February last (No. 612, p. 111) to be under discussion for the formation of a central sales office or bureau for the salt trade, has fallen through owing to the Salt Union directors having finally decided on Thursday to hold aloof. Without their co-operation the scheme is, of course, impracticable.

THE SULPHIDE CORPORATION.—During the period of four weeks from April 25th to May 22nd 16,561 tons of ore were milled at the Central mine, yielding 3,266 tons of concentrates. At Cockle Creek during the same period 3,360 tons of concentrates, 455 tons of residues, and 131 tons of purchased ore were smelted, yielding 1,992 tons of silver-lead bullion containing 98,022 ozs. of silver.

NITRATE STATISTICS.—The Permanent Nitrate Committee in their Public Statistical Circular, for June, state the position of nitrate of soda as follows:—(1) Total exports to Europe, May, 1,463,000 qtls.; loading for Europe, 1st June, 1,181,000 qtls. (2) Imports, Europe, May, 136,350 tons. (3) Deliveries, Europe, May, 123,060 tons. (4) Visible supply, Europe, 1st June, stocks and afloat, 339,800 tons.

BACTERIAL SEWAGE FARM AT BLACKBURN.—The Sewage Committee of the Blackburn Corporation have issued a report recommending the bacterial treatment of sewage by Dibdin's process. They recommend the laying down of five acres of bacteria beds at a cost of £21,000., and estimate that an actual saving can be effected on the method now in use. Experimental bacteria beds have been in use at the Samlesbury Sewage Works for twelve months, with the most satisfactory results.

GERMAN CHEMICAL DIVIDENDS.—Profits recently reported by prominent German chemical works are as follows: Chateau-Salins Soda Fabrik Co, profit 397,541 m.; dividend 5%; Elberfeld Carbonic Acid Works, balance, 23,315 m.; Gereisheim Chemical Factory, a loss of 13,823 m. for 1898; Huefeld Chemical Factory, profit for 1898, 166,696 m.; dividend, 6%: Leopoldshall Ascania Factory, profit, 31,246 m.; Oranienburg Chemical Factory, profit, 155,447 m.; the Berdingen Chemical Factory, Weilerter-Meer, a dividend of 14%.

MANCHESTER RIVERS COMMITTEE.—The usual meeting of the Rivers Committee of the Manchester Corporation was held on Monday, Alderman Sir Bosdin T. Leech in the chair. Mr. Miller attended on behalf of the Town Clerk, and reported the result of the action of the Mersey and Irwell Joint Board against the Corporation. After some discussion a resolution standing in the name of Mr. Grimshaw in favour of steps being at once taken to obtain plans and estimates for laying out the land at Davyhulme available for bacteria beds was withdrawn.

H. SPICER REDIVIVUS—Under the title of the Surrey Paper Mills, Ltd., a company is to be formed to take over the Catteshall Mills, Godalming, Surrey, with which H. Spicer was recently connected. The capital is £40,000. of which 20,000 £1. preference shares are now being issued at par, but of which only 15s. is to be called up. The directors are:—T. Y. Nuttall (of Cooke and Nuttall, Ltd.,) Horwich, Lancs.; Col. C. Sartorius, Godalming and Lisbon; J. A. Nordberg (Director of Alsing & Co., Ltd.); with James Beveridge as managing director. The list opened on Thursday, the 8th inst. and closes on 12th inst.

FINED £10. FOR WATERED MILK.—Thomas Pickford, dairyman, of St. Stephen's-street, Salford, was summoned at the Salford Police Court last week, for selling milk which upon analysis was found to contain 29 per cent. of added water. Inspector Crossley stated that on the 20th of April he stopped the defendant's boy as he was delivering milk, and made a purchase. This he submitted to the analyst, with the result stated. The defendant has been previously fined 15s. and costs, and the Stipendiary now inflicted a penalty of £10. and costs.

INSTITUTE OF CHEMISTRY: *Examination in Therapeutics, etc.*—Notice is hereby given that the next examinations in therapeutics, pharmacology and microscopy, will be held at 30, Bloomsbury-square, London, W.C., on Saturday, the 29th, and on Monday, the 31st days of July, 1899. This examination is open to Fellows and Associates of the Institute of Chemistry, and to candidates who have passed the examinations for the Associateship but are under the age requisite for election. The examination is practical, written and oral, and includes the following: The recognition of specimens of poisonous chemicals and crude drugs having well-marked physical characters, ordinarily found in commerce; the detection, by inspection and by means of the microscope, of adulterations, substitutions and impurities in such substances. Candidates are required to show a general knowledge of the therapeutic effects of such chemicals and drugs, and of the quantities which, taken internally, would be injurious or fatal to man. A form of application for admission to the examination is appended. Candidates desirous of presenting themselves are required to send in their applications, together with the examination fee—two guineas (£2. 2s.)—on or before Monday, the 3rd day of July, 1899, on which day the list will be closed. For candidates who have failed once the fee is one guinea; candidates who have failed more than once pay two guineas.

HAMPERS FOR CARBOYS.—"Many mickle make a muckle," is an old saying, but true. Carboy hampers, costing from 10d. to 1s. each, are small things, and seem hardly worth serious consideration, but when we remember that between 300,000 and 400,000 of these insignificant articles are used every year by chemical manufacturers and others in England, involving an outlay of between £15,000. and £20,000, we think that any reliable suggestion for reducing this expenditure is worthy of notice. At one time nothing but wicker baskets were used, but for the last few years these have been superseded by hoop-iron hampers, simply because hoop-iron lasts longer than wicker. Hoop-iron makes a very strong and substantial-looking hamper; but, unfortunately, it has a very weak point in that there is a very large surface to be acted on by acids and fumes, and but little thickness to be eaten through before the baskets become useless. The ideal form or section of material for hampers is undoubtedly that which will give the greatest thickness with the least surface to be acted on, namely, round iron or steel wire, the price of which has hitherto seemed prohibitive. The Wire Hamper Co., Middlesbrough, appear to have overcome this difficulty, as they are now making steel wire hampers from No 6 gauge, wire which is a little over $\frac{1}{8}$in. thick, and consequently four times thicker than hoop-iron. We know of one chemical manufacturer who has been using wire hampers of his own make for 25 years, although they cost him more than he could buy hoop-iron for—the obvious reason being that they last longer.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols now figure at 6½d. for 90's and 7d. to 7¼d. for 50/90's. There is a fractional change in naphthas or carbolic acids, though the inquiry for the former is perhaps a trifle brisker. Creosote keeps firm. Pitch is fairly promising, and is quoted 27s. 6d. f.o.b. East Coast and 24s. 6d. West Coast.

Sulphate of Ammonia is weaker, and prices have fallen away considerably. Makers have next to nothing to sell, however, so prices are practically nominal with London, outside makes at £12. 12s. 6d., Hull, £12. 7s. 6d., and Leith, £12. 8s. 9d. to £12. 10s.

MISCELLANEOUS CHEMICAL MARKET.

The alkali trade on the whole is fairly brisk. There is a continued good demand for all the products, and values are well maintained. Bleaching powder for export is steady, and values unaltered at £4. 15s. to £5., in hardwood casks, f.o.b. Liverpool; softwoods, £4. 2s. 6d. per ton, f.o.r. makers' works. Chlorates unchanged at 3½d. and 3¾d. for potash and soda respectively. Caustic Soda is moving in moderate quantity, but stocks are still heavy and prices remain as for some time past, viz., f.o.b. Liverpool, 77%, £7. 12s. 6d.; 74%, £7. 7s. 6d.; 70%, £7.; 60%, £6. per ton. Ammonia alkali, 58%, bags, £3. 17s. 6d. f.o.r. Soda crystals and bicarbonate are without alteration in values. Sulphur firm at £4. 12s. 6d. per ton. Sulphate of copper continues in good request at £26. 10s., f.o.b., spot shipment, but rather easier on forward business. In salt cake there is only moderate inquiry, and price easier at 26s. 6d. to 27s. per ton f.o.r. Brown acetate of lime steady at £4. 17s. 6d. nett. ex ship; grey, £7. 17s. 6d. per ton. White sugar of lead, foreign, lower at £23 15s., c i f. Acetate of soda, £13. per ton. Other acetates and acetic acid unaltered. Potash, caustic and carbonate, are in fairly good demand and values well maintained. Carbolic acids firm at 2s. 1d. for 60's crude and 7¼d. for 39/40's crystals, f.o.b. Yellow prussiate of potash and soda are offering more freely, and quotations are slightly easier at 8d. and 6¾d. per lb. respectively. Cyanide, 98/100%, 1s. 0½d. per lb. White powdered arsenic has a firmer tendency and quotations for best brands are now £19 5s. to £19. 10s. nett., f.o.r. Garston. Oxalic acid is selling at lower rates.

THE METAL MARKETS

LONDON, WEDNESDAY.—Pig iron steady: Scotch Warrants closed at 64s. 10d., Middlesbrough, 60s. 1d., cash, and hematite, 68s. 11½d. Copper firmer: Chili bars, G.O B.'s and G.M.B.'s, closed at £74. 17s. 6d. to £75. 2s. 6d. cash; £74. 10s. to £74. 15s. three months. Tin lower: Straits closed at £116. 7s. 6d. to £116. 17s. 6d. cash, and £117. to £117. 10s. three months. Australian, £116 15s.; English ingots, £120. Lead firm: Spanish, £14. 5s. to £14. 6s. 3d.; English, £14 10s. 0d. Silesian spelter, ordinary, £27. 10s. Nickel, 1s. 2½d. Antimony, £39. 5s. Quicksilver: first hands, £8. 5s.; second hands, £8. 4s. *Copper Shares* steady: Cape, 4$\frac{5}{16}$ to 4$\frac{11}{16}$; Copiapo, 3¾d. to 4d.; Libiola, 1⅞ to 2⅛.; Mason and Barry, 3⅞ to 4⅛; Rio Tinto, 45$\frac{3}{16}$d. to 45$\frac{5}{16}$; Tharsis, 8¼ to 8¾.

GLASGOW, WEDNESDAY.—Market quiet. Scotch done at 64s. 9d. to 64s. 9½d. cash, and 65s. 1½d. month; buyers, 64s. [illegible]

sellers ½d. more. Cleveland done at 60s. 3d., 60s., and 60s. 1½d. cash; also at 60s. 6d., 60s 6½d., and 60s. 3d. month; buyers, 60s. 1½d. cash; sellers, 60s. 2d. Cumberland hematite done at 69s. 3d. and 68s. 11½d cash; also at 69s. 6d., 69s. 3d., and 69s. 3½d. month; buyers, 68s. 11½d. cash; sellers 69s. 0½d. Middlesbrough hematite idle.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

OILS.—Palm oil is firm and scarce, but the inquiry keeps fairly active. There is rather more inquiry for olive, and the market closes steady. Linseed keeps firm, with sellers of Liverpool makes in export casks asking 20s. 9d. to 21s. cwt. Cottonseed is rather quiet, there not being much doing in Liverpool refined, at 17s to 17s 6d cwt. Castor oil is dull and slow of sale. Good seconds Calcutta is quoted 2 13/16d. to 2 7/8d; first pressure French 2 5/8d. to 2¾d. per lb. Tallow is quiet, but prices are well maintained. Resin keeps moving well for all grades at full prices Spirits of turpentine is quieter, at 35s. cwt. Petroleum firm, with American 6¼d. to 7½d., and Russian refined 5⅝d. per gallon.

CAKES.—American Western linseed on the spot have a firm market, with sellers still quoting £6. to £6 7s. 6d., but there is not much passing thereat, and in other imported descriptions Bombay is unaltered at £6. 15s. to £7. per ton, with rather a dragging market thereat; whilst values of both River Plate and Russian are nominal for want of supplies for the time being. In Liverpool makes there is only a small consumptive business doing at former quotations, viz., £7. to £8. per ton, according to brand. Good to choice brands of American decorticated cottonseed remain steady, with only a moderate inquiry experienced, and values are repeated at £5. 12s. 6d. to £6. 2s. 6d., according to quality; whilst sales in Liverpool makes continue on a very limited scale, but £6. 2s. 6d. to £6 15s. is still quoted, according to brand. Liverpool undecorticated makes have a rather firmer market, with sellers now quoting £4. 17s. 6d. to £5. 7s 6d., according to brand, but not much passing thereat, whilst with arrivals of Egyptian there are now sellers at £4. 10s. per ton.

COLOURS.—Prices are steady, and practically without change. Ochres: Oxfordshire—common £10., medium £12., best £15; Derbyshire—common 40s., medium 50s., best 60s.; Welsh—best 91s., seconds 50s, and common 18s.; Devonshire, 40s. to 45s.; French, J C, 65s. Umber: 40s. to 45s. White lead: £16 Red lead unchanged. Venetian red: £6. to £10. Cobalt: Prepared oxide, 9s 9d.; black, 9s; blue, 6s. Oxide of iron: Common, £7., medium, £10.; finest, £20.; Zinc oxide: £22. 10s. to £25.

TYNE CHEMICAL REPORT.

TUESDAY.

Chemicals are quiet, with a moderate demand, and prices are practically unaltered. Soda crystals, £2. 12s. 6d. per ton gross weight locally. Caustic soda, 70%, £7., and 76/77%, £8. per ton. Sulphur steady at £4. 15s. per ton.

Bleaching powder, softs, £5. 5s. per ton, nett; do., hards, £5. 10s. per ton, nett; caustic soda: 76/77% £8., and 70% £7. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do, 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75°Tw., £2. 12s. 6d. per ton, nett; do., 100°Tw., £3. per ton, nett; do., 140°Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. od. per ton, nett; blanc fixe, £6. 10s. per ton nett; chloride of barium, refined crystals, £6. 15s. od. per ton, nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt is brisk at 9s. 6d. per ton, f.o.b. Tees.

COALS.—Trade continues very steady and there is a full demand for most qualities of coal. Coke is in strong demand and higher prices are being asked. To-day's quotations are:—Best Northumbrian steam, 12s. 6d. to 13s. per ton; second qualities, 11s. 6d. to 12s. per ton; small steam, 6s. to 6s. 6d. per ton; bunker coals, 9s. 6d. to 10s. per ton; household coals, quiet, 10s. to 11s. per ton; coke, 25s per ton.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—The market value of linseed oil continues on the improvement, both oil and seed being firmly held. The exports of oil for the week have been:—Linseed oil, 7 tons Belgium, 2 Denmark, 6 Germany, 9 Holland, 5 Norway, 2 Sweden, total 31 tons. Cotton oil, 8 tons Belgium, 3 Denmark, 12 France, 6 Germany, 35 Holland, 92 Sweden, total 156 tons. The stocks of Seed in Hull, month ending May, were: Linseed 31,030 qrs. against 8,877 qrs. April. Rapeseed 6,705 qrs. against 4,785 qrs. Cottonseed 3,058 tons against 1,652 tons April, whilst the imports for the month have been 56,476 qrs. against 62,897 qrs April. Rapeseed 20,148 qrs. against 1,589 qrs. Cottonseed 12,611 tons against 11,471 tons. Linseed oil firm, 18s. 9d. paid spot, per cwt. naked, 18s. being the value June/August and 16s. 10½d., September/December. Boiled and Refined, £1. to £1 10s. per ton extra. Refined cotton, steady, 15s. 6d., naked spot, 15s. 9d. June/Aug., 14s. 4½d. November/April, crude, 14s. 4½d spot. Casks £1. and ordinary barrels £1. 10s. per ton extra. Olive oil quiet, values unchanged. Olive oil soap quoted 5s. per ton lower, £15. 15s. to £17. 15s. Castor oil, extracted here, cold drawn, 29s. 6d. per cwt. in barrels; in cases 3¾d. per lb. First pressure, 27s. 6d. per cwt. in barrels; in cases 3½d. per lb. Seconds, 25s. 9d. per cwt. in barrels; in cases 3d. per lb. Arachide nut oil 26s. per cwt. Oleines £18. 10s. to £21. Cod oil, £16. to £18. per ton. Resins unchanged. Colza unchanged.

CAKES.—Mills here are not busy; they are waiting fresh supplies of Linseed, and the present open weather does not stimulate a business in feeding stuffs. Linseed cakes quiet but firm, 95% pure £7. to £7. 5s. per ton. Oil cakes (linseed), £6. to £6. 5s. Russians, £6. 15s. to £7. Cotton cakes firmer, best makes £5. 2s 6d. to £5. 5s.; seconds, £4. 17s. 6d. to £5.; decorticated, £6. 5s. Meal, £6. Rape cakes, Black Sea, £4.

PAINTS.—The present summer weather has opened a fair home demand, prices are unaltered.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

With the exception of the slightly easier feeling in salt cake, the tendency amongst the common chemicals is rather to the firmer side. Oversea transit is reported as in very good volume, with bulky lots of bleaching powder for Baltic and Mediterranean, and good show of soda crystals for the Channel ports. Bleaching powder is a shade firmer in the quotations. Sulphate of copper is a little easier, without any positive break in prices, the quotation being still £26 10s. Sulphate of ammonia has been done at £13. prompt f.o.b. Leith as the top price, and makers are unwilling to admit that it has gone back much as yet; but unquestionably it is easier. Quotations range from the top value down to £12. 15s., according as the seller is well sold or not so. Mineral oils and paraffins steady at the old rates.

Chief prices current are:—Soda crystals, £2. 5s. to £2. 7s. 6d. basis nett, Tyne; soda ash, £4. 2s. 6d. to £4. 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 5s. to £4. 15s. nett, Glasgow; caustic soda, white, 74° £7. 7s. 6d., 70/72° £7., 60/62° £6., and cream 60/62° £6., all nett, Liverpool; bleaching powder, 35/37°, £5. 10s. to £5. 12s. 6d. nett, Tyne; saltcake, 20/6; borax, English refined, £16., and boracic acid, £26. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s., nett, Liverpool; bichromate of potash, 3½d., less 6% for Scotch and English deliveries (for export, 3¼d. nett, f.o.b. Glasgow); bichromate of soda, 2¾d., less 6% for Scotch and English deliveries (for export, 2½d. nett, f.o.b. Glasgow); chlorate of potash, 3⅝d, less 5% Liverpool; nitrate of soda, 8s. 3d.; sulphate of ammonia, £12. 17s. 6d. prompt, f.o.b. Leith; salammoniac, first and second white, £35. and £33 nett, any port; sulphate of copper, £26. 10s., less 5% Liverpool; paraffin scale, hard, 1⅞d. to 2d. per lb., and soft 2d. per lb.; paraffin wax, 120° semi-refined, 2¼d. to 2½d. per lb.; paraffin spirit (naphtha), 9d. to 9½d. per gal; paraffin oil (burning), No. 1, 6¼d.; and crystal, 6¾d., at Glasgow and other big centres, for Scotch buyers, English sales a shade lower; ditto (lubricating) 865° £4. 15s. to £5. 5s., 885° £5. 10s. to £6., and 890/895° £6. 5s. to £6. 10s. Week's imports of sugar at Greenock were 1,210 hhds., 328 barrels, and 10,993 bags beet, unrefined.

New Companies.

Hartlepools Salt and Brine Co., Ltd.—CAPITAL £30,070. in £10. shares. This company has been formed to acquire the leasehold works known as the Hartlepools Salt and Brine Works, at Greatham, in the county of Durham, now carried on by Sir C. Furness and R. C. Walker; also to acquire 24 freehold cottages at Greatham, and to carry on the business as manufacturers of and dealers in salt, chemicals, and minerals. The subscribers to the memorandum of association are:—C. Furness, K.B., Tunstall Court, West Hartlepool; R. C. Walker, Owton Fence House, Greatham, Durham, gentleman; R. Walker, Owton Fence House, Greatham, Durham, secretary; J. J. C. Warwick, Grange-road, West Hartlepool, secretary; D. Cooke, Sadberge-avenue, West Hartlepool, secretary; J. F. Lund, Hutton-avenue, West Hartlepool, clerk; W. Dixon, Clifton-avenue, West Hartlepool, accountant. Registered office, Salt Works, Greatham, Durham.

Anglo-Spanish Salt Syndicate, Ltd.—CAPITAL £60,000., in £1. shares. This company has been formed to adopt an agreement with the Natural Epsom Salts Syndicate, Ltd., for the purchase of the saline lake or lagoon known as La Mina Fortuna, at La Higuera, near the town of Corral Rubino, in the province of Albaceto, Spain, and deal in sulphate of magnesia, and other chemical or mineral products. The subscribers to the memorandum of association are:—A. S. Brown, 45, Renfield-street, Glasgow, accountant; W. A. Lunan, Clunie, Helensburgh, clerk; W. D. Cairney, 45, Renfield-street, Glasgow, chartered accountant; W. Howie, jun., Craiglea, Kilmalcolm, Renfrewshire, clerk; A. Jeffrey, 134, St. Vincent-street, Glasgow, merchant; R. A. Stewart, 5, Salton Gardens, Glasgow, accountant; J. B. Sutherland, 9, Harriet-street, Pollockshields, Glasgow. Registered office, 5, Victoria Buildings, St. Mary's-gate, Manchester.

Docker Bros., Ltd.—CAPITAL £150,000., in £5. shares (15,000 preference). This company has been formed to acquire and take over as a going concern the businesses carried on by Frank D. Docker and Ludford C. Docker, at Birmingham and elsewhere, under the style of "Docker Bros.," and "Wm. Badams," and the similar business carried on by "Dockers, Ltd.," to enter into an agreement with the said Frank D. Docker and Ludford C. Docker, and to carry on the business of varnish, japan, paint, colour, oil, and turpentine manufacturers and merchants, chemists, druggists, drysalters, chemical manufacturers, iron and brass founders,&c. The subscribers to the memorandum of association are:—John P. Lacy, J.P., Norlands, Edgbaston, Birmingham; Frank D. Docker, Icknield, Port-road, Birmingham; Mrs. Lucy C. Docker, Notton Park Lodge, Edgbaston; Ludford C. Docker, Icknield, Port-road, Birmingham; Mrs. Marie Docker, Farquhar-road, Edgbaston, Birmingham; J. Pierce Lacy, 6, Waterloo-street, Birmingham; A. W. Freeman, 6, Bennett's Hill, Birmingham; Frank E. Smith, 6, Bennett's Hill, Birmingham; Joseph H. Rice, Clifton-road, Sutton Coldfield, cashier.

English Electro-Métallurgical Co., Ltd.—CAPITAL £700,000., in £1. shares (300,000 six per cent. cumulative preference). This company has been formed to acquire the undertakings of Elmore's Patent Copper Depositing Co., Ltd., Elmore's Wire Manufacturing Co, Ltd, Elmore's American and Canadian Patent Copper Co., Ltd., and Elmore's Foreign and Colonial Patent Copper Depositing Co., Ltd., to carry on the business of metallurgists and manufacturers and dealers in copper and other metals and alloys of the same, and to carry on the business of electricians, electrical and mechanical engineers, suppliers of electricity, and manufacturers of and dealers in electrical apparatus. The subscribers to the memorandum of association are:—W. Dunn, 31, Abchurch-lane, E.C., solicitor; G. F. Schmettau, 91, Croxted-road, West Dulwich, law student; C. W. Longman, 181, Leathwaite-road, Clapham Common, gentleman; W. Boyes, 2, Carpenter Villas, Hill-street, Peckham, S.E., gentleman; A. H. Wynne, The Nook, Southend-on-Sea, accountant; H. Mason, Finden Cottage, Dulwich Village, S.E., gentleman; Wallace Read, 190, Friern-road, East Dulwich, S.E., solicitor.

IMPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.

Week ending May 27th.

Acetate of Lime—
Germany, 1 pk. R. W. Greeff & Co.

Acetic Acid—
Belgium, 168 pks. T. Palmer

Acetone—
U. States, 5 pks. T. Jones & Co.
Germany, 10 T. H. Lee
,, 40 E. Catlin
Austria, 21 Thames S. T. & L. Co., Ld.
,, 21 D. T. Domeier & Co.

Alkali—
France, 50 c. J. Barber & Co.
U. States, 85 ,,
Canada,, 159 ,,

Alumina Sulphate—
Germany, £90 H. Wallace & Co.

Ammonia—
Holland, £35 R. W. Greeff & Co.

Ammonium Nitrate—
Holland, 54 cks. S. E. Rly. Co.

Antimony Ore—
France, .. 1 t. Girard Brs. & Co.
China, 3 L. & I. D. Jt. Co.

Arsenic—
Germany, £23 B. Anti-Fouling C. & P. Co.
Melbourne, 230 G. H. Adams & Co.

Barium Chloride—
Germany, £90 Petri Brs.

Barium Sulphate—
Belgium, 35 pks. J. L. Lyon & Co.

Barytes—
Germany, 69 pks. W. Harrison & Co.
Belgium, 66 ,,
Germany, 10 H. Lambert

Bleaching Powder—
France, 49 pks. J. M. Steel & Co.

Caoutchouc—
Zanzibar, 13 c. Hale & Son
Natal, 5 J. T. Rennie, Son & Co.
Straits, 115 W. Pope & Co.
France, 5 Girard Brs. & Co.
Mexico, 22 Praschkauer & Co., Ld.
Straits, 27 E. Boustead & Co
,, 166 L. & I. D. Jt. Co.
Ibo, 47 ,,
Germany, 7 Butler's Wf., Ld.
,, 6 Clarke & Smith
E. Indies, 72 W. M. Smith & Sons
P. E. Africa, 3 Forbes, Forbes & Co.
Straits, 223 Butler's Wf., Ld.
U. States, 60 Lewis & Peat
Zanzibar, 49 F. Huth & Co.
,, 14 L. & I. D. Jt. Co.
Germany, 14

Castor Oil—
France, 50 cs. F. Boehm
Italy, 20 Major & Field
,, 20 A. & M. Zimmermann
France, 4 cks. C. Tennant, Sons & Co.

Caustic Potash—
Germany, 20 pks. J. M. Steel & Co.
France, 20 Petri Brs.

Chemicals (*otherwise undescribed*)
Holland, £15 Phillips & Graves
France, 132 Mory & Co
Holland, 23 H. Harkness
,, 64 S. C. Jones
Germany, 15 Craven & Co
,, 387 A. & M. Zimmermann
Holland, 12 J. Owen
Belgium, 6 Leach & Co.
,, 58 T. Palmer
,, 23 F. Stahlschmidt
U. States, 13 A. E. Piggott
Belgium, 20 C. Atkins & Nisbet
Germany, 26 Butler's Wf., Ld.
,, 302 L. & I. D. Jt. Co.
,, 10 R. W. Greeff & Co.
U. States, 29 R. Davies & Co.
Holland, 25 Hernu Peron & Co.
U. States, 535 S. C. Jones
Belgium, 25 R. W. Greeff & Co.
,, 82 John Cockerill Line

Chlorine—
Germany, £30 A. & M. Zimmermann

Coal Products—
Naphtha
Roumania, 106 cks. L. & I. D. Jt. Co.
Pitch
W. Indies, 121 brls. Fellows, Morton & Co.
Germany, 55 H. Hunt
N. Russia, 500 cks. J. Batson & Co.

Cobalt Ore—
Sydney, 2 t. C. Christophersen & Co.

Cream of Tartar—
France, 5 pks. F. C. Devon & Co.
,, 12 Vokins & Co., Ld.
,, 5 W. C. Bacon & Co.
Spain, 4 B. & F. Wf. Co., Ld.
Italy, 20 Howards & Son
Spain, 3 City Com. Wf., Ld.

Disinfectants—
Germany, £51 J. Norrenberg & Co.

Dyestuffs—
Alizarine
Holland, 15 pks. G. S. N. Co.
Argols
Italy, 160 pks. Thames S. T. & L. Co., Ld.
785 B. Jacob & Sons

Cochineal
Canary Is., 9 pks. W. M. Smith & Sons

Cutch
Belgium, 50 pks. J. Harrison
Rangoon, 520 H. A. Litchfield & Co.
,, 500 Leach & Co.
,, 600 G. S. N. Co.
,, 186 Phillips & Graves
U. States, 200 Brown & Elmslie
,, 800 H. A. Litchfield & Co.

Extracts
Holland, 10 pks. J. Norrenberg & Co.
Boston, 25 Beresford & Co.
U. States, 50 W. Burton & Sons
Denmark, 1 M. D. Co.
Austria, 68 Fellows, Morton & Co.
,, 250 Boutcher, Mortimore & Co.
Denmark, 13 Sorensen & Co.
,, 1 Masters Brs.

Gambier
Straits, 554 pks. P. & O. Co
,, 234 Brinkmann & Co.
,, 264 Bellamy's Wf., Ld.
,, 510 Beresford & Co.
,, 2,500 E. Boustead & Co.
,, 464 Union L. Co., Ld.
,, 843 J. Graves

Indigo
E. Indies, 21 chts. J. W. Cook & Co.,
,, 10 L. & I. D. Jt. Co.
Holland, 5 ,,
Italy, 1 srn. ,,

Myrabolams
E. Indies, 4,058 pks. W. Shelcott & Sons
,, 800 Brown & Elmslie

Naphthaline
Germany, 25 pks. Fleming's Oil & Co. Co

Orchella
Germany, 96 pks. Prop. Bull Wf.

Saffron
Spain, 1 pk. J. Knill & Co.

Shumac
Italy, 1,500 pks. J. Kitchen, Ld.
,, 140 W. A. Sparrow
,, 63 R. Waters
,, 500 W. Shelcott & Sons

Tanners' Bark
Natal, 141 t. J. T. Rennie, Son & Co.
,, 18 Flack, Chandler & Co.
Melbourne, 25 Deering & Robottom
Belgium, 35 Hicks, Nash & Co.
Adelaide, 100 Baxter & Hoare
Japan, 10 c. Beck & Pollitzer

Valonia
A. Turkey 50 t. Anning & Cobb

Farina—
Straits, 2,617 pks. Clyde S. Co.
Holland, 100 Ohlenschlager Brs.
Belgium, 10 T. H. Lee
France, 60 W. Jacques
Germany, 50 J. Knill & Co.
U. States, 1 A. F. White & Co.

Glucose—
U. States, 6,525 pks. 15,284 c. R. G. Hall & Co.
,, 50 310 A. B. Curtis & Co.
,, 200 1,200 E. & T. Pink
,, 250 250 Ohlenschlagers Brs.
,, 2,000 2,000 Pearce, Pelly & Co.
Germany, 25 203 Beresford & Co.
,, 13 105 M. D. Co.
U. States, 1,525 4,350 L. & I. D. Jt. Co.
,, 150 911 L. Norman & Co., Ld.
,, 1,000 1,000 C. Barnard
,, 100 596 A. E. Piggott
,, 1,000 1,000 Pickford & Co.

Glue—
France, £12 Bennett S. S Co.,
,, 490 Burnett Brs. & Sons
,, 15 E. Flageollet & Co.
Belgium, 11 Leach & Co.
France, 450 T. M. Duche & Sons
Canada, 45 L. & I. D. Jt. Co.
Holland, 55 A. G. Robinson & Co.
Germany, 130 L. & I. D. Jt. Co.
,, 150 Steinhoff, Sons & Co.
,, 90 J. Barber & Co.
Holland, 30 G. S. N. Co.
France, 51 Mory & Co.
,, 305 C. A. & H. Nicholls
Germany, 18 O'Hara, Matthews & Co.
France, 152 J. Harrison

Glycerine—
Germany, £230 R. W. Greeff & Co.
,, 12 Butler's Wf., Ld.
Holland, 400 J. Barber & Co.
,, 89 Phillipps & Graves

Gutta Percha—
Straits, 10 t. 4 c. Anderson, Weber & Smith
,, 53 H. W. Jewsbury & Co.
Colon, 4 Prop Bull Wf.

Manganese Ore—
Germany, 8 t. Blackwell & Co.

Manure—
Belgium, 20 t. W. H. Barrett
,, 16 T. H. Lee
Germany, 46 Humphery & Co.
E. Indies, 152 A. Hunter & Co.
,, 180 Fox, Roy, & Co.

Methyl Alcohol—
Germany, 720 g. W. Iszard
,, 10 dms. T. H. Lee
U. States, 120 brls. Parker & Co.

Molasses—
U. States, 50 cks. 312 c. C. Barnard
,, 50 265 G. Hornzee
,, 374 1,983 Ohlenschlager Brs.
,, 50 300 R. G. Hall & Co.
, 100 620 B. Smith & Co.
, 100 537 W. & W. H. Stead
,, 400 2,282 J. Forsey
,, 200 1,131 Falkenburg & Hesse
Alexandria, 751 3,500 Props. Cooperage Wf.
W. Indies, 57 pns. 1 hd. Wilkinson & Gavaller

Ochre—
Holland, 117 pks. Phillipps & Graves

Oxalic Acid—
Norway, 10 pks. S. C. D. Co.
Holland, 14 R. W. Greeff & Co.
,, 14 J. Owen

Paraffin Wax—
U. States, 25 brls. L. & I. D. Jt. Co.
,, 300 Lon. & Til. Ltge. C. & D. Co.

Phosphates—
Belgium, 200 t. Anglo-Contl. Guano Works

Potassium Bromide—
Germany, 3 pks. H. Lorenz

Potassium Carbonate—
Germany, 9 t. 8 c. J. M. Steel & Co.
France, 4 J. A. Reid

Potassium Cyanide—
Germany, 2 pks. H. Lorenz

Potassium Muriate—
Germany, 500 pks. Bessler, Waechter, & Co.

Potassium Oxymuriate—
Sweden, 218 pks. G. Boor & Co.

Potassium Permanganate—
Germany, 1 pk. H. Lorenz

Potassium Prussiate—
Holland, 40 pks. R. W. Greeff & Co.
,, 36 J. Owen
France, 35 ,,

Potassium Sulphate—
Germany, 750 pks. F. W. Berk & Co., Ld.

Potassium Sulphide—
Holland, 40 pks. J. Owen

Pyroligneous Acid—
France, 60 pks. Burnett Brs. & Sons

Red Lead—
Germany, 238 pks. Fuerst Brs.
,, 8 H. Lambert

Rosin—
France, 50 cks. W. Harrison & Co.
E. Indies, 1,899 Moore & Hole

Saltpetre—
Germany, 5 cks. L. & I. D. Jt. Co.
,, 50 P. Hecker & Co.
,, 84 pks. ,,
,, 1,000 bgs. Anglo-Contl. Guano Works
E. Indies, 1,637 Lucas & Spencer's Wf.
,, 307 Perkins & Homer
,, 740 J. W. Cook & Co., Ld.

Silver Nitrate—
Germany, 2 pks. R. W. Greeff & Co.

Soda—
Austria, 19 t. 4 c. J. Norrenberg & Co.

Soda Ash—
Holland, 66 t. R. Waters

Sodium Hyposulphite—
Germany, 6 t. 4 c. H. Lambert

Sodium Nitrate—
Chile, 14,394 bgs. W. Montgomery & Co.

Starch—
Belgium, 1,125 pks. E. & T. Pink
,, 50 Union Ltge. Co., Ld.
,, 100 J. Barber & Co.
,, 505 T. H. Lee
,, 280 Becker & Wagner
,, 40 Taylor Brs.
,, 160 T. Ronaldson & Co.
,, 46 Leach & Co.
Holland, 22 J. Barber & Co.
,, 45 G. S. N. Co.
,, 967 Little & Johnston
Germany, 1,060 Horne & Co.
,, 120 Argo S. S. Co.
U. States, 430 Pickford & Co.
,, 400 R. G. Hall & Co.
,, 100 C. Tennant, Sons, & Co.
France, 24 L. Mendelsohn

Stearine—
Belgium, 345 bgs. H. Hill & Sons
,, 63 W. H. Mitchell

Strontium and Barium—
Holland, £34 Phillipps & Graves

Sulphates—
Belgium, £50 Taylor Brs.

Sulphur—
Italy, 203 t. B. Jacob & Sons
,, 10 Typke & King
,, 14 J. Houghton & Sons
,, 200 Fuerst Brs.
,, 20 G. Boor & Co.
,, 47 F. C. Devon & Co.
,, 35 J. Kitchin, Ld.
,, 6 Fellows, Morton, & Co., Ld.
Spain, 350 J. Forster

Superphosphates—
Belgium, 52 t. Chemical Works (Late H. & E. Albert)

Tallow—
Adelaide, 37 cks. Mordaunt Brs.
,, 207 Phillipps & Graves
,, 431 J. W. Cook & Co., Ld.
Sydney, 21 L. & I. D. Jt. Co.
,, 91 J. R. Francis & Co.
,, 7 Phillipps & Graves
,, 88 Union Ltge. Co., Ld.
,, 53 G. S. Yuill & Co.
N. Zealand, 150 Union Ltge. Co., Ld.
,, 96 Deering & Robottom
,, 105 Phillipps & Graves
,, 21 J. Groves
,, 139 N. Z. L. & M. A. Co.
,, 115 Low, Sons, & Bedford
,, 567 Beresford & Co.
,, 25 Brown & Elmslie
,, 62 Culverwell, Brooks, & Co.
,, 400 A. B. Curtis & Co.
Queensland, 32 Dalgety & Co., Ld.
,, 37 Beresford & Co.
,, 23 J. Greig
,, 268 Goad, Rigg, & Co.
Melbourne, 154 Mordaunt Brs.
,, 10 pps. C. M. Lampson & Co.
,, 77 Flack, Chandler, & Co.
,, 84 cks. Elkan & Co.
,, 22 H. Lambert
U. States, 50 Lucas & Spencer's Wf.
France, 11 C. S. Lovell
,, 225 bgs. H. Hill & Sons
,, 75 Powell, Jones, & Co.

Tartar—
Italy, 28 pks. B. Jacob & Sons

Tartaric Acid—
France, 44 pks. F. C. Devon & Co.
Holland, 22 Kirkpatrick, Barr, & Co.
Belgium, 17 F. C. Devon & Co.

Ultramarine—
Holland, 6 pks W. Harrison & Co.
,, 8 J. Barber & Co.
,, 3 G. S. N. Co.
,, 3 Hernu, Peron, & Co.

Varnish—
Germany, 18 pks. Butler's Wf., Ld.
France, 10 R. Thompson
Holland, 1 Stobbs, Ld.
U. States, 20 Atlantic Transport Co.
,, 202 Taylor Brs.

White Lead—
France, 17 pks. T. T. Creed
Belgium, 22 J. L. Lyon & Co.
,, 94 T. & W. Farmiloe, Ld.
,, 42 Burrell & Co.
Germany, 15 Randall Brs.
Holland, 3 G. S. N. Co.
,, 49 A. & M. Zimmermann

Wolfram Ore—
Queensland, 5 c. Blackwell & Co.

Wood Pulp—
Norway, 400 pks. Christophersen, Andrews, & Co.
,, 1,280 W. E. Bott & Co.
,, 16 W. D Cork
U. States, 45 McNamara & Co.
Sweden, 250 Tough & Henderson
,, 9,665 Henderson, Craig, & Co.
,, 396 Alsing & Co., Ld.
,, 244 W. G. Taylor & Co., Ld.
Canada, 1,800 Furness, Withy & Co.
Germany, 13 Butler's Wf., Ld.
Belgium, 2,008 J. Harrison
Denmark, 96 Thames S. T. & L. Co., Ld.
Holland, 26 Phillipps & Graves
,, 112 Henderson, Craig, & Co.
,, 250 Robinson, Roberts & Co.

Zinc Oxide—
Belgium, 100 pks. Soundy & Sons
Germany, 500 ,,
Holland, 75 Burrell & Co.

Zinc White—
Holland, 120 pks. Spies Brs.

LIVERPOOL.

Week ending May 25th.

Alcohol—
Bordeaux, 1 cs.

Alkali—
Newport News, 800 bgs.

Aluminium—
New York, 380 bxs. T. Ashbuury

Antimony Ore—
Constantinople, 202 bgs.

Barytes—
Antwerp, 33 cks. / 50 bgs.

Bone Ash—
Campana, 231 bgs.

Bones—
Seville, 146 bgs. / 1 sk.
B. Ayres, 250 bgs.
Alexandria, 282 / 20 t.

Castor Oil—
Calcutta, 1,004 cs. Ralli Brs.
Marseilles, 17 brls. J. J. Mack & Son
,, 6 Belfast S. S. Co.
,, 405 / 5 cs.

Cobalt—
Rouen, 4 cs. Co-op. W'sale Society, Ld.

Cobalt Ore—
Havre, 4 cs.

Colours—
New York, 1 brl. J. E. Hart & Co.
Antwerp, 2 cks.
Hamburg, 22 cs.

Cottonseed Oil—
Baltimore, 1,150 brls.

Cream of Tartar—
Marseilles, 4 cks.
Bordeaux, 15

Dyestuffs—
Extract
Havre, 1 ck. Cunard S. S. Co.
New York, 250 brls.
Rotterdam, 50 cs.
Rouen, 186 cks. Co-op W'sale Society, Ld.
Fiume, 305
Halifax, 110 Boutcher, Bacon & Co.
Fiume, 521 brls. Oak Extract Co., Ld.
,, 140 D. Clermont & Donner

Fustic
New York, 6 t.

Gambier
Singapore, 1,488 bls. / 504 bgs.

Myrabolams
Marseilles, 8,319 bgs.

Shumac
Barcelona, 100 bgs.
Marseilles, 5 bls.
Palermo, 700 bgs. J. B Moors & Co.
,, 100 J. Kitchin, Ld.
,, 2,850 / 146 bls.

Tannin Extract
Ghent, 20 brls.
Marseilles, 150

Turmeric
Marseilles, 170 bgs.

Valonia
Constantinople, 253 bgs.
Smyrna, 220 222 t. Barry Brs.
,, 861 20
C'stantinople 1,350 J. Tekian

Dyewood Extract—
New York, 175 brls. McArthur & Co.
Philadelphia, 30

Farina—
Havre, 100 sks. Cunard S.S Co.

Ferro Chrome—
Bordeaux, 18 cks.

Glucose—
New York, 50 brls.
Baltimore, 500

Glue—
New York, 20 brls. Anglo-Am. Oil Co.
,, 50 cs. Eng. & Amer. Mchny Co.
Rouen, 6 cks. Co-op. W'sale
20 brls. Society, Ld.
Hamburg, 40 bgs. / 3 cks.
New York, 10 brls. Musson & Co.
Rouen, 2 cks.

Glue Stock—
Philadelphia, 4 kgs. A. Baumann & Co.
,, 5 cks / 1

Gutta Percha—
Singapore, 235 cs.

Linseed Oil—
Constantinople, 8 brls.

Logwood Extract—
New York, 28 cks. West Indies C. Wks.
21 kgs.

Mica (Pulp)—
New York, 10 brls.

Ochre—
Rouen, 145 cks. Co-op. W'sale Society, Ld.
Marseilles, 89
Havre. 102

Paint—
Boston, 100 cs. M. Nichol & Co.

Paraffin Wax—
New York, 2,045 brls. Thompson & Bedford

Phosphates—
Ghent, 500 t. J. T. Fletcher & Co.
Norfolk, 1,005 Tennessee Phosphate Co.
Beaufort, S.C. 2,749 United Alkali Co.

Potash—
Rouen, 96 cks. Co-op. W'sale
9 dms. Society, Ld.

Pyrites—
Huelva, 3,326 t. Matheson & Co

Quebracho—
Hamburg, 90 bgs.

Saltpetre—
Hamburg, 33 cks.

Soap—
New York, 50 cs. T. McCullan & Co.
W. C. Africa, 2
N. Orleans, 1,008 brls.
New York, 1,800
Marseilles, 1 cs. Clay, Dod & Co.
,, 52 / 50 bxs.
Smyrna, 402
, 10 cs.
Newport News, 100 bxs. H. A Lane & Co.
Boston, 20 cs.
Marseilles, 675
Naples, 237
Hamburg, 1 / 12 bls. / 3 cks.

Soap Lyes—
Marseilles, 60 dms.

Soda—
Genoa, 53 brls.

Soda Crystals—
Ghent. 1 bg. J. T. Fletcher & Co.

Sodium Chlorate—
Marseilles, 250 brls.

Starch—
Ghent, 20 cs.
Antwerp, 310
Dunkirk, 161
Hamburg, 76
Baltimore, 700 bxs.

Stearine—
Antwerp, 13 bgs. J. T. Fletcher & Co.
,, 13

Tallow—
Pensacola, 150 tcs.
Campana, 193 cks.
Boston, 65 tcs. Otto Monsted Ld.
Philadelphia, 250
New York, 250 hhds. Colby & Co.

Galveston, 400 tcs. T. M. Marc & Co.
" 500 J. Mackee & Co.
New York, 349 / 500 hhds. / 660
B. Ayres, 140 cks. / 250 pps.

Tartaric Acid—
Marseilles, 16 cks. / 30 brls.

Verdigris—
Marseilles, 5 cks.

Waste Salt—
Hamburg, 1,016 bgs.

White Lead—
Antwerp, 24 cks.
Rotterdam, 16

Wood Pulp—
Gothenburg, 75 pks. G. Schenkenwold & Co.
" 7 bls.
Rotterdam, 152 / 18 pks.
Boston, 5 crts. Lever Bros., Ld.
New York. 110 bdls.

Zinc Oxide—
New York, 150 brls.
Cenoa, 79 bgs.

MANCHESTER.

Week ending May 27th.

Antimony—
Treport, 2 cks.

Antimony Salt—
Rotterdam, 4 cks.

Barytes—
Antwerp, 300 brls.

Calcium Carbide—
Treport, 2 cs.

Caustic Potash—
Treport, 38 dms.

Chemicals *(otherwise undescribed)*
Rotterdam, 32 cks.

Coal Products—
Aniline Salt
Rotterdam, 23 cks.
Pitch
Hamburg, 49 cks.

Colours—
Hamburg, 5 cks.

Dyestuffs—
Extracts
Rotterdam, 10 cks.
Treport, 10

Farina—
Rotterdam, 100 bgs.

Glucose—
New York, 102 brls.

Glue—
Antwerp, 73 pks.
Hamburg, 20 bgs.
Rotterdam, 220
Treport, 110 bls.

Paraffin Wax—
New York, 175 brls. / 400 cs.

Potash—
Hamburg, 20 cks.

Potassium Carbonate—
Treport, 4 cks.

Red Lead—
Rotterdam, 20 cks.

Saltpetre—
Hamburg, 7 cks.

Soap—
Genoa, 615 bgs.

Sodium Nitrate—
Rotterdam, 8 cks.

Sodium Sulphide—
Hamburg, 2 cks.

Starch—
Antwerp, 709 cs.
New York, 1,900 bgs. 800 sks.
Rotterdam, 76

Sulphur—
Leghorn, 30 brls.

Tallow—
New York, 50 hds.

Tartaric Acid—
Rotterdam, 41 cks.

Waste Salt—
Hamburg, qty.
Treport, 13 cks.

White Lead—
Antwerp, 12 cks.

Wood Pulp—
Gothenburg, 2,917 bls.
Hamburg, 40
Sarpsborg, 3,060 Kellner, Partington P. P. Co., Ld.

Zinc Oxide—
Antwerp, 15 cks.

HULL.

Week ending May 27th.

Acids—
Amsterdam, 4 cks. Hull & Netherlands S. S. Co.
" 25 brls.
Bari, 24 cks. Wilson, Sons, & Co., Ld.
Rotterdam, 6 Hull & Netherlands S. S. Co.
Stockholm, 2 Wilson, Sons, & Co., Ld.

Barytes—
Antwerp, 69 cks. Bailey & Leetham, Ld.
Bremen, 57
Rotterdam, 22 Hull & Netherlands S. S. Co.

Calcium—
New York, 43 pks.

Chemicals *(otherwise undescribed)*
Antwerp, 1 cs. Wilson, Sons, & Co., Ld.
Danzig, 20 cks.

Coal Products—
Pitch
Rotterdam, 50 cks. Hull & Netherlands S. S. Co.
St. Petersburg, 3 Wilson, Sons, & Co., Ld.

Colours—
Antwerp, 4 cks. Bailey & Leetham, Ld.
" 19 pks. Wilson, Sons, & Co., Ld.
Bremen, 2 cks. J. Pyefinch & Co.
Danzig, 5
Rotterdam, 2 / 4 brls. / 35 pks. Hull & Netherlands S. S. Co.

Dextrine—
Stettin, 100 bgs.

Dyestuffs—
Extract
Bordeaux, 30 cks.
New York, 2 brls.
Rouen, 2 cks. Wilson, Sons, & Co., Ld.
Indigo
Karachi, 11 cs. Wilson, Sons, & Co., Ld.
Rotterdam, 5 brls. Hull & Netherlands S. S. Co
Myrabolams
Bombay, 15,639 bgs. Wilson, Sons, & Co., Ld.
Shumac
Palermo, 445 bgs. Wilson, Sons, & Co., Ld.
" 2,000

Farina—
Stettin, 255 bgs.

Glucose—
New York, 170 brls.

Glue—
Bergen, 10 brls. Wilson, Sons, & Co., Ld.
Fiume, 20 bgs. "
Rouen, 24 cks. "
" 6 pks.

Guano—
Drontheim, 300 bgs. Wilson, Sons, & Co., Ld.

Lead Acetate—
Stettin, 14 cks. Wilson, Sons, & Co., Ld.

Linseed Oil—
Amsterdam, 2 brls. Hull & Netherlands S. S. Co.

Magnesite—
Fiume, 20 bgs. Wilson, Sons, & Co., Ld.

Manure—
Karachi, 500 bgs.

Ochre—
Rouen, 9 cks.

Paraffin Wax—
New York, 455 brls.

Phosphates—
Ghent, 1,000 bgs. Wilson, Sons, & Co., Ld.

Potash—
Antwerp, 20 dms. Wilson, Sons, & Co., Ld.
Dunkirk, 48 cks. "
New York, 10 brls.

Potassium—
Antwerp, 10 bgs. Wilson, Sons, & Co., Ld.

Red Lead—
Rotterdam, 4 cks. Hull & Netherlands S. S. Co.

Silicate—
Antwerp, 10 bgs. Wilson, Sons, & Co., Ld.

Soap—
Libau, 1 cs. Wilson, Sons, & Co., Ld.
Molfetta, 40 "

Soda—
Antwerp, 107 pks. Wilson, Sons, & Co., Ld.
Ghent, 270 "

Sodium Silicate—
Rotterdam, 1 ck. Hull & Netherlands S S Co.

Starch—
Amsterdam, 20 bgs. Hull & Netherlands S. S. Co.
Antwerp, 276 bxs. Wilson, Sons, & Co., Ld.
Bremen, 3,548 pks. Veltmann & Co.
Ghent, 111 cs. Wilson, Sons, & Co., Ld.
Stettin, 1 bg. "

Stearine—
Antwerp, 38 bgs. Wilson, Sons, & Co., Ld.

Sulphur—
Catania, 30 bgs. Wilson, 15 brls. Sons, & Co., Ld.
" 50 t. / 1,010 bgs. / 27 cks.

Tallow—
Dunkirk, 194 cks. Wilson, Sons, & Co., Ld.
New York, 250 "
" 12 hds.

Tartar—
Bordeaux, 1 ck.

Turpentine—
Bordeaux, 6 cks.

Ultramarine—
Rotterdam, 5 cks. Hull & Netherlands S. S. Co.

Varnish—
Antwerp, 7 pks. G. J. Glew

Waste Salt—
Hamburg, qty.

White Lead
Amsterdam, 67 cks. Hull & Netherlands S. S. Co.
Antwerp, 25 Bailey & Leetham, Ld.
Rotterdam, 55 Hull & Netherlands S. S. Co.

Wood Pulp—
Bergen, 167 bls Wilson, Sons, & Co., Ld
Christiania, 1,321 "
" 34 cs. "
Drontheim, 1,000 bls. "
Gothenburg, 160 "
Hamburg, 200 pks. Bailey & Leetham, Ld.
Helsingfors, 134 bls. J. Good & Sons
" 305
Holmestrand, 2,000
Stockholm, 64

Zinc Oxide—
Antwerp, 40 brls. Bailey & Leetham. Ld.
" 175 Wilson, Sons, & Co., Ld.

Zinc White—
Amsterdam, 40 cks. Hull & Netherlands S. S. Co.

GLASGOW.

Week ending June 1st.

Acetone—
Hamburg, 20 dms. J. Currie & Co.

Barium Sulphate—
Antwerp, 205 bgs.

Barytes—
Amsterdam, 100 bls. J. Rankine & Son
Rotterdam, 35 cks "
Hamburg, 44 J. Currie
70 bgs. & Co.

Bleaching Powder—
Rotterdam, 23 cks. J. Rankine & Son

Castor Oil—
Leghorn, 10 cs.

Chemicals *(otherwise undescribed)*
Rotterdam, 7 cks. J. Rankine & Son
Amsterdam, 1 cs. "

Coal Products—
Alizarine
Rotterdam, 59 brls. J. Rankine & Son
Aniline
Rotterdam, 15 cks. J. Rankine & Son

Colours—
Rotterdam, 1 ck. J. Rankine
32 pks. & Son
Hamburg. 15 cks. J. Currie
2 cs. & Co.

Cream of Tartar—
Genoa, 2 brls.

Dyestuffs—
Extract
Marseilles, 150 cks.
Rouen, 3
Shumac
Palermo, 250 bgs.

Dyewood Extract—
Rotterdam, 2 cks. J. Rankine & Son

Glucose—
New York, 554 brls.

Glue—
Genoa, 10 cks.
Antwerp, 4
Rouen, 33

Molasses—
N. Orleans, 499 brls.

Ochre—
Marseilles, 39 cks.
Newport News, 79 brls.

Oxalic Acid—
Hamburg, 15 cks. J. Currie & Co.

Paint—
Marseilles, 110 bxs.

Painters' Colours—
Antwerp, 4 cks.

Paraffin Wax—
New York, —— 70 brls.

Phosphates—
Newport News, 27 crbys.
Antwerp, 1,010 bgs.

Potash—
Hamburg, 67 cks. J. Currie & Co.

Pyrites—
Huelva, 2,801 t. T. S. & C. Co., Ld.

Rosin—
New York, 600 brls.
Savannah, 4,850

Saltpetre—
Hamburg, 3 cks. J. Currie & Co.

Soap—
Leghorn, 20 cs.
Naples, 19

Soap Lyes—
Marseilles. 20 ms.

Soda—
Genoa, 58 brls. / 60 cs.

Sodium Chlorate—
Marseilles, 18 cks.

Starch—
New York, 450 bgs.
Montreal, 170 sks.
Newport News, 750
Rotterdam, 167 bxs. J. Rankine & Son

Tallow—
Philadelphia, 150 tcs.

Tartar—
Bordeaux, 6 cks.
Naples, 4

Tartaric Acid—
Marseilles, 4 cks.

Waste Salt—
Hamburg, 1,130 bgs. J. Currie & Co.

White Lead—
Rotterdam, 72 cks. J. Rankine & Son

Wood Pulp—
Germany, 5,022 brls. Henderson, Craig & Co.

Rotterdam, 70 bls. J. Rankine & Son

Zinc Oxide—
Antwerp, 10 cks.
New York, 150 brls.
Hamburg, 50 cks. J. Currie & Co.

TYNE.

Week ending May 27th.

Antimony Ore—
Tampico, 7,490 sks.

Barytes—
Antwerp, 300 bgs. Tyne S. S. Co.
Rotterdam, 150 ,,

Chloride—
Hamburg, 1 ck. Tyne S. S. Co.

Colours—
Antwerp, 3 cks. Tyne S. S. Co.
Hamburg, 1 1 cs. ,,
Rotterdam, 2 ,,

Glucose—
Baltimore, 200 brls. J. Cooke & Co
New York, 50 ,,

Glue—
Rotterdam, 10 bgs. Tyne S. S. Co.

Gutta Percha—
Hamburg, 1 cs. Tyne S. S. Co.

Red Lead—
Gothenburg, 1 ck. Pyman, Bell & Co.

Rosin—
Baltimore, 600 brls. J. Cooke & Co.

Soap—
Bergen, 1 bx.
Rotterdam, 3 cs. Tyne S. S. Co.

Starch—
Antwerp, 190 cs. Tyne S. S. Co.
Rotterdam, 118 ,,

Varnish—
Amsterdam, 4 cks. W. Swanston & Sons

Waste Salt—
Hamburg, 82 t.

Wood Pulp—
Arendal, 200 bls. P. H. Matthiesen & Co.
Bergen, 19 ,,
Gothenburg, 80
Rotterdam, 130 Tyne S. S. Co.

Zinc Oxide—
Antwerp, 25 brls. Tyne S. S. Co.
New York, 150 J. Cooke & Co.

GOOLE.

Week ending May 24th.

Alkali—
Calais, 11 cks.

Bark—
Antwerp, 81 bgs.

Caoutchouc—
Boulogne, 15 cks.

Chemicals *(otherwise undescribed)*
Hamburg, 9 cs.

Coal Products—
Creosote Salts
Rotterdam, 8 cks.

Colours—
Amsterdam, 12 cks. 1 cs.
Boulogne, 10 1
Hamburg, { 75 bgs. / 1 ck. 2
Rotterdam, 489 65

Dyestuffs—
Extract
Amsterdam, 10 cks.
Antwerp, 42
Logwood
Laguna, 430 t.

Farina—
Delfszyhl, 200 bgs.
Hamburg, 300

Glucose—
Calais, 100 bgs.

Nickel Sulphate—
Hamburg, 1 ck.

Phosphates—
Ghent, 808 bgs.

Potash—
Antwerp, 2 cks.
Calais, 12 dms
Dunkirk, 20

Quebracho Extract—
Antwerp, 66 oks.

Saltpetre—
Rotterdam, 100 bgs.

Sodium Sulphate—
Rotterdam, 10 dms.

Starch—
Ghent, 260 bxs.

Tartaric Acid—
Antwerp, 4 cks.
Rotterdam, 8

Wood Pulp—
Hamburg, 80 pks.
Rotterdam, 54 bs.
Skien, 4,132

Zinc Oxide—
Antwerp, 1 ck.

GRIMSBY.

Week ending May 27th.

Barytes—
Hamburg, 20 cks.
Rotterdam, 100 bgs.

Caoutchouc—
Antwerp, 1 bl.
Hamburg, 6 cs.
Rotterdam, 5

Chemicals *(otherwise undescribed)*
Rotterdam, 1 kg.
Hamburg, 1 ck. 2 cs.

Coal Products—
Pitch
Dieppe, 5 cks.

Colours—
Antwerp, 7 cks. 108 pks.
Hamburg, 32 10 cs.
Rotterdam, 3 kgs. 16

Glue—
Dieppe, 4 sks.

Starch—
Antwerp, 60 cs.

Varnish—
Hamburg, 1 bkt.

Wolfram Ore—
Hamburg, 8 cs.

Wood Pulp—
Malmo, 54 bs.

EXPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending May 31st.

Acids—
Singapore, 6 bxs. £12

Alkali—
Colombo, 12 c. £5
Yokohama, 6 18

Ammonia—
Cape Town, 3 c. £15

Ammonia (Anhydrous)—
Dusseldorf, 12 cyldrs. £33
Cologne, 33 82

Ammonium Carbonate—
Antwerp 12 cks. £30
Rotterdam, 7 20 kgs. 70

Ammonium Sulphate—
Hamburg, 30 t. £390
Bremen, 47 611
Newport News, 207 17 c. 2,110
Cullera, 273 3,510
Grenada, 2 10 32

Borax—
Harlingen, 7 c. £15
Durban, 1 cs. 15

Carbonic Acid Gas—
Rotterdam 5 tubes £25
Channel Is., 35 13
Nagasaki, 4 cs. 25

Caustic Potash—
Lyttelton, 2 t. 13 c. £55

Caustic Soda—
Pt. Elizabeth, 3 t. 18 c. £62
Shanghai, 12 9
Normanton, 2 2 16
Philadelphia, 86 9 500
Singapore, 15 13
Wellington, 13 35

Chemicals *(otherwise undescribed)*
Dunkirk, 16dms. £72
Brussels, 4 cs. 65
Boulogne, 2 18
Amsterdam, 6 pks. 20
Pt. Elizabeth, 36 13
Barranquilla, 5 10
Bangkok, 11 58
Madras, 11 26
Lisbon, 5 kgs. 30
Para, 15 brls. 40
Penang, 1 cs. 16
Auckland, 116 66
Genoa, 30 178
Hamburg, { 5 / 24 cks. 516
Hiogo, 10 73
Townsville, 15 12
Rotterdam, 10 kgs. 57
Antwerp, { 20 / 26 cks. 500
Durban, 10 5 127
Victoria, B.C., 15 21
Sydney, 11 10
Ostend, 4 15
Teneriffe, 5 t. 18
Las Palmas, 20 80
Melbourne, 12 28 179
Adelaide, 16 kgs. 17 6 188
Shanghai, 6 30
Durban, 3 23
Calcutta, 30 6 69
Philadelphia, 50 cks. 655
Marseilles, 17 45
Halifax, 10 hhds. 16
Wellington, 7 26
Lyttelton, 3 63

Chloride of Lime—
Auckland, 1 t. 1 c. £12

Citric Acid—
Melbourne, 10 c. £75
Dusseldorf, 2 15
Penang, 1 8
St. Petersburg, 16 cks. 564
Calcutta, 1 6
Perth, 10 kgs. 63
Antwerp, 5 36
Amsterdam, 10 60
Colombo, 1 8
Durban, 1 7

Coal Products—
Alizarine
Boston, 14 cks. £164
St. Petersburg, 5 cs. 733
Anthracene
Cologne, 240 cks. £323
Sydney, 5 kgs. 18
Benzine
Durban, 5 dms. £5
Benzol
Antwerp, 1 dm. £10
Rotterdam, 50 cks. 157
Beta Naphthol
St. Petersburg, 8 cks. £74
Carbolic Acid
Cologne, 48 cks. £200
Philadelphia, 3 dms. 46
Auckland, 22 12
Ludwigschafen, 48 248
Toronto, 30 108
Coal Tar Dyes
Boulogne, 2 cks. 2 cs. £37
Creosote
Lisbon, 79,500 galls. £1,479
Dieppe, 69,080 363
Newport News, 250 cks. 186
Mobile, 3,343 2,710
Naphtha
Adelaide, 15 cs. £61
Melbourne, 50 93
Naphthaline
Antwerp, 230 cks £246
Bordeaux, 58 bgs. 36
Amsterdam, 4 cks. 10
Paris, { 12 / 88 bgs. 92
Pitch
Montreal, 112 cks. £90
N'port News, 1,104 bgs. 177
Sydney, 5 cks. 8
Hochfeld, 210 t. 235
Mauritius, 10 brls. 4
Dunkirk, 315 378
St. John, N.B., 100 30
Havre, 125 175
Amsterdam, 730 855
Antwerp, 855 1,017
Boston, 550 cks. 275
Pyridine
Sydney, 5 cs. £13
Hamburg, 4 dms 130
Ludwigschafen, 7 124
Tar
Madras, 7 mlts. £14
Pt. Elizabeth, 150 dms. 11
Hamburg, 200 brls. 78
Mauritius, 27 21
Delagoa Bay, 200 kgs. 305 33
Melbourne, 10 2 32
Sydney, 300 61
Wellington, 25 5

Coal Products *(otherwise undes.)*—
Auckland, 1 cs. £27
Mauritius, 10 pks. £7

Copper Sulphate—
M. Video 1 t. £28
Durban 5 c. 7
Bourgas, 2 8 61
Bordeaux, 15 2 382
Antwerp, 5 3 130

Cream of Tartar—
Pt. Elizabeth, 3 c. £11
Sydney, 1 t. 76
Wellington, 1 1 75

Disinfectants—
Antwerp, 25 brls. £50
Hong Kong, 100 dms. 78
Bangkok, 15 pks. 15
Canton, 6 cs. 22
E. London, 20 cks. 11
Rangoon, 10 49
Durban, 90 21
Barbadoes, 10 dms. 20
Sydney, 18 4 pks. 40
Wellington, 10 18
Calcutta, { 20 / 260 dms. 36
Guano—
Demerara, 25 t. £178
Manure—
Landerneau, 260 t. £1,700
San Francisco, 30 120
Malaga, 14 11 t. 110
Durban, 1 13 47
Trinidad, 3 23
Teneriffe, 14 60
Grenada, 2 18
Mauritius, 55 411
Cullera, 379 4 1,200
Phosphoric Acid—
Mauritius, 9 t. 18 c £187
Potassium Bicarbonate—
Philadelphia, 2 t. 4 c. £80
Potassium Chlorate—
Durban, 10 c. £16
Potassium Cyanide—
E. London, 15 t. £1,611
Rockhampton, 2 140
Delagoa Bay, 30 3,800
Melbourne, 4 40 cs. 845
Charters Towers, 50 532
Townsville, 50 377
New York, 125 700
Auckland, 7 13 c. 891
Potassium Permanganate—
Mauritius, 6 c. £22
Potassium Prussiate—
Yokohama, 10 c. £38
Potassium Sulphate—
Colombo, 2 t. 11 c. £31
Saltpetre—
Montreal, 5 t. £100
Piræus, 3 60
Cape Town, 13 c. 12
Oporto, 3 14 70
Sheep Dip—
Calcutta, 750 dms. £40
Soda—
Boston, 3 t. 4 c. £47
Quebec, 1 12 5
Soda Crystals—
Sydney, 2 t. 4 c. £12
Tangiers, 2 2 8
Gibraltar, 2 10 10
Sodium Bicarbonate—
Auckland, 1 t. £8
B. Ayres, 1 10
Delagoa Bay, 5 c. 3
Cape Town, 10 7
Singapore, 1 8

Sodium Bisulphide—
Philadelphia, 1 c. £5
Sodium Hyposulphite—
Hong Kong, 18 c. £6
Sodium Sulphite—
Melbourne, 1 t. £36
Strychnine—
Brisbane, 1 cs. £10
Sulphur—
Philadelphia, 16 c. £27
Cape Town, 135 cks. 11 230 kgs. 221
Wellington, 1 t. 7
Sulphuric Acid—
Cape Town, 25 cs. £16
Pt. Elizabeth, 25 20
Madras, 25 10
Tartaric Acid—
Durban, 2 c. £12
Boulogne, 5 21
Adelaide, 10 55
Fremantle, 3 18
Limon 3 14
Pt. Elizabeth, 1 ck. 3 24
Wellington, 2 11
Washing Powder—
Adelaide, 20 cks. £100
Lyttelton, 20 100

LIVERPOOL.

Week ending May 31st.

Acetic Acid—
Bombay, 9 c. 1 q. £6
Syra. 6 16
Cartagena, 1 t 6 32
Montreal, 2 6
Alumina Sulphate—
Bombay, 2 t. 3 q. £9
Aluminous Cake—
Melbourne, 7 t. 4 c. £18
Ammonia—
B. Ayres, 2 t. 1 c. £170
Ammonium Bisulphate—
Calcutta, 9 c £6
Ammonium Carbonate—
Odessa, 6 c. £13
Marseilles, 16 20
Venice, 1 t. 6 40
Genoa, 1 6 40
Ammonium Muriate—
Naples, 10 c. £10
Barcelona, 3 t. 10 67
Bilbao, 1 7 33
Mexico, 9 10
Ammonium Sulphate—
Hamburg, 14 t £161
Trinidad, 50 10 c. 656
Motril, 51 10 670
Messina, 10 10 136
Palermo, 25 312
Kingston. Ja., 12 134
Gd. Canary. 19 14 2 q. 312
Valencia, 486 8 3 5,833
Malaga, 126 8 1,470
Cheribon, 124 1,498
Sourabaya, 416 9 1 4,542
Samarang, 286 4 2 3,052
Madeira, 40 10 2 480
Arsenic—
B. Ayres, 5 t. 1 q. £99
M. Video, 1 20
Sydney, 10 c. 10
Bleaching Powder—
Baltimore, 126 cks.
Bombay, 51 cs.
Boston, 176
Calcutta, 150
Chicago, 25 bxs.
Everett, 80
Genoa, 273
Ghent, 21
Johnsonburg, 55
Kalamazou, 37
Leghorn, 45
Lisbon, 6 brls.
Middleton, O., 20
Milwaukee, 299
Munsie, 62
Naples, 250
N. Orleans, 17
Newport News, 14
New York, 389
Odessa, 42 pks.
Oporto, 30
Philadelphia, 214
Rotterdam, 30
Spring Grove, 80
Valleyfield, 16
Venice, 18
Vera Cruz, 35 cs.
Wabash, 35
Blood Albumen—
Lisbon, 1 ck. £18
Boracic Acid—
Gaffe, 2 t. 4 c. £68
Montreal, 2 14 67
Borate of Lime—
Hamburg, 11 c. 1 q. £7
Borax—
Havana. 1 t. £14
Bordeaux, 5 85
Danzig, 10 11 c. 330
Habana, 1 12 1 q. 20
Boston, 10 33
Hamburg, 23 6 2 398
Santiago, 12 10
Cienfuegos, 4 3
Brisbane, 1 11
Montreal, 8 2 2 131
Galatz, 1 2 15
Havana, 2 12 3 43
London, Ont., 1 1 17
Hamilton, 10 1 165
Pt Natal, 1 18 34
Adelaide, 10 7
Sydney, 9 113
Calcium Chloride—
Leghorn, 5 t. 2 c. £11
Rangoon, 2 1 5
Brisbane, 10 1 22
Rouen, 10 29
Brisbane, 4 19 11
Auckland, 1 5 —
Wellington, 2 1 —
Napier, 11 15 —
Sydney, 13 8 32
Caustic Potash—
Hong Kong, 4 c. 1 q. £7
Bombay, 5 8
E. St. Louis, 5 6
Chicago, 3 t. 11 92
Caustic Soda—
Adelaide, 204 dms. 6 brls.
Alexandria, 93
Algoa Bay, 21 cs
Alicante, 30
Aliveri, 30
Amsterdam, 23
Ancona, 78
Antonisia, 12
Asuncion, 30
Barcelona. 315 45 cks.
Bari, 123
Bombay, 100 10
Brisbane, 30
B. Ayres, 60
Cabedello, 20
Calcutta 107
Cartagena, 35 30
Catania, 34
Chicago, 20 brls. 25 bxs.
Cienfuegos, 31
Corunna, 10
Dunedin, 33
E. London, 6 cs.
E. St. Louis, 15 brls. 10
Fiume, 30
Galatz, 14
Gefle, 14 51
Genoa, 210
Ghent, 52
Gutujewsky, 50 kgs.
Hamburg, 204
Havana, 140
Havre, 35
Hiogo, 187
Ibrail 155
La Guayra, 8
Leghorn, 99
Lisbon, 150
Malaga. 76 10 cks.
Melbourne, 116
M. Video, 50
Montreal, 142 2 cs. 15 kgs.
Naples, 112
Natal. 95
Newcastle, 15
New York, 100 100 brls. 25 bxs
Odessa, 162
Oporto, 15
Para, 20
Paranagua, 10
Penang, 15
Penado, 30
Pernambuco, 73
Portland, Or., 5
Punta Arenas, 20
Rangoon, 25
Rio de Janeiro, 75 2 cs.
Rio G. do Sul, 60
Rotterdam, 27 71 pks.
San Sebastian, 60
Savanilla, 10
Seville, 100
Sourabaya, 335
Smyrna, 3
Sydney, 416
Tampico, 76
Tarragona, 30
Trieste, 30
Tripoli, 5
Valencia, 18
Valparaiso, 16
Venice, 50
Volo, 65
Yokohama, 10
Chemicals *(otherwise undescribed)*
B. Ayres, 1 t. 9 c. 2 q. £8
Catania, 3 1 3 14
Boston, 39 2 203
Mitylene, 5 1 23
Odessa, 5 130
Alexandria, 21 brls. 69
Bahia, 1 1 5
Madras, 13 4 83
Galatz, 1 15 9
Montreal, 11 11 99
Bombay, 25 110
Johannesburg, 8 2 800
Genoa, 10 8 210
Barcelona, 20 14 17 2 325
Seville, 6 14 116
Bari. 1 19 34
Braila, 10 8
Fremantle, 1 33
Calcutta, 19 3 5
Vancouver, 11 50
Stockholm, 1 2 18
Rio de Janeiro, 10 1 2 614
Sydney, 6 33
Salonica, 3 10
Philadelphia, 31 15 794
St. John's, 1 3 20
Melbourne, 1 5
China Clay—
Baltimore, 250 cks.
Barcelona, 550 bgs.
Bombay, 167
Boston, 1,190
Calcutta, 156
Lisbon, 149
Madras, 80
Newport News, 890 120
New York, 200
Pernambuco, 10
Philadelphia, 226
Rio de Janeiro, 100
Chloride of Lime—
Shanghai, 1 t. 5 c. £10
E. St. Louis, 1 12 11
New York, 5 6 44
Citric Acid—
Seville, 6 c. £43
Coal Products—
Alizarine
Lisbon, 2 kgs.
New York, 2 brls.
Aniline Colours
Calcutta, 4 cs.
Hespler, 5 brls.
New York, 31 pks.
Aniline Dyes
Calcutta, 3 cs.
Aniline Oil
Boston, 8 dms.
Genoa, 10
Aniline Salt
Barcelona, 5 cks.
Boston, 53 cs.
Genoa, 20 brls.
Leghorn, 4
Carbolic Acid
Rotterdam, 5 t. £100
Baltimore, 1 5 c. 51
Montreal, 1 61
Milan, 1 4 1 q. 70
Copenhagen, 2 7
New York, 3 207
Calcutta, 1 1 33
Singapore, 3 cks. 13
Cartagena, 5 15
Rouen, 10 11 2 344
Brass, 2 dms. 2
Creosote
Lisbon, 100 brls.
Creosote Oil
Bordeaux, 50 cks.
Philadelphia, 500
Naphtha
Sydney, 100 dms.
Naphthaline
New York, 28 cks.
Pitch
St. John, N.B., 5 brls.
Tar
Abonnema, 1 ck.
Bordeaux, 200
Galatz, 50 brls.
Mazatlan, 42
St. John, N.B., 10
St. John, Nfd., 20
Vera Cruz, 35
Tar Oil
Antwerp, 25 cks.
Copperas—
Salonica, 6 t. 1 c. 3 q. £12
Algoa Bay, 2 1 4
M. Video, 5 18 1 12
B. Ayres. 19 2 28
Copper Sulphate—
Genoa, 223 t. 20 cks. —
Bordeaux, 474 13 c. £11,303
Oporto, 18 15 2 q. 396
Ancona, 37 16 2 854
Brindisi, 25 cl s. 14 8 —
Naples, 73 4 2 1,788
Venice, 49 18 3 1,235
Leghorn, 275 3 3 2,924
M Video, 13 13
Trieste, 2 1 51
Bari, 1 10 1 38
Alexandria, 1 1 28
Barcelona, 20 1 493
Mollendo, 10 16
Batoum, 100 9 2 2,675
Nantes, 19 2 3 501
Galatz, 5 128
Rouen, 17 3 447
B Ayres, 10 1 263
Cream of Tartar—
St. John's, Nfd., 10 t. 15 c. £183
Disinfectants—
New York, 15 c. £30
Calcutta, 3 t. 47
Glycerine—
Shanghai, 5 c. £15
New York, 25 t. 14 643
Rotterdam, 24 5 2 q. 980
San Francisco, 24 9 3 1,504
Baltimore, 10 14 238
Bombay, 10 30
Sydney, 3 9 2 176
Guano—
Malaga, 10 t. 1 c. £70
Lead Acetate—
Lisbon, 8 c. £11
Lead Nitrate—
Lisbon, 9 c. 3 q. £9
Magnesia—
Bordeaux, 20 cs.
Genoa, 1
Manure—
Gd. Canary, 10 t. £35
Piræus, 13 6 c. 232
B. Ayres, 9 2 q. 9
Oxalic Acid—
Boston, 19 t. 10 c. 2 q. £65
Paint—
Alexandria, 320 kgs.
Antwerp, 30 1 ck.
Axim, 3
Baju du Grande. 16
Bay of Islands, 5
Beyrout, 60
B. Ayres, 240 15 cs. 5
Calcutta, 6
Candia, 2
C. Coast Castle, 83
Cartagena, 60
Genoa, 2 102
Gd. Canary, 30
Halifax, 12 cks.
Hamburg, 29 2
Havana, { 11 / 20 dms.
Hong Kong, 50
Iquique, 12
Kustendjie, 6 cks.
Las Palmas, 65
Malmo, 100 4
Manaos, 2
Madras, 14
Matanzas, 1
Mayaguez, 6
M. Video, 47
Nassau, { 100 / 7 / 3 dms.
Natal, 50
New York, 60
Para, 16 cks.
Philadelphia, 1
Ponce, 1
Rosario, 10 p'ls.
St. John's, N'fd, 725
San Sebastian, 20 dms.
Teneriffe, 40 bgs.
Valencia, 28
Valparaiso, 17
Painters' Colours—
Amboina, 70 kgs.
Boca, 7 brls.
B. Ayres, 15 cs.

Lagos, 43 pks.
Madras, 8 cks.
Manaos, 6
M. Video, 20 crts. 3
Para, 3 pks
Pernambuco, 25 kgs.
Singapore, 4 brls.
Tripoli, 80
Truro, 4—

Paraffin Wax—
Jaffa, 7 cs.
Leghorn, 60
Manaos, 30
Rio de Janeiro, 75 brls.

Phosphorus—
B. Ayres, 1 t. 5 c. £203 / 4 cs.
Hiogo, 20 150
Osaka, 5 42
M. Video, 7 c. 42

Potassium Bicarbonate—
Salonica, 6 c. 2 q. £11
Yokohama, 4 t. 19 2 160

Potassium Bichromate—
Alexandria, 1 t. £31
Montreal, 24 16 c. 721
Rio de Janeiro, 8 13
Seville, 1 1 34

Potassium Carbonate—
E. St. Louis, 5 c. £6

Potassium Chlorate—
Boston, 1 t. 5 c. £42
Callao 5 1 q. 11
Copenhagen, 3 15 113
Gutujewsky, 40 1,209
Hiogo, 5 150
Konigsberg. 1 31
New York, 40 1,218
Odessa, 2 10 78
Philadelphia, 12 10 384

Potassium Cyanide—
Frontera, 3 c. 3 q. £17
Taltal, 2 t. 224

Potassium Oxalate—
New York, 2 c. 1 q. £6

Potassium Prussiate—
Galatz, 5 c. £12
Halifax, 4 3 q. 19

Salammoniac—
Alexandretta, 10 brls. £42
Bari, 6 c. 9
Naples, 1 t. 1 35
Trieste, 1 30

Salt—
Adelaide, 10 t. 20 cs.
Antwerp, 80
Baltimore, 370
Barbadoes, 138 9 c.
Boston, 800
Brisbane, 25 cs.
Brussels, 100
B. Ayres, 100 150
Burutu, 348 10 c.
Calcutta, 12,975
Cameroons, 57 3
C. C. Castle, 6 5
Cape Palmas, 15
Cape Town, 97 6
Chicago, 300
Conakry, 10 1
Copenhagen, 53
Durban, 2 cs.
E. London, 35 15 c.
Flensburg, 465
Galveston, 50
Gefle, 98 7
Ghent, 108
Gibraltar, 5 50 cs.
Halmstadt. 255
Hamburg, 110 10 c.
Iceland, 194 16
Iromsoe, 812
Johannesburg, 100 sks.
Kingston, 25 50 cs.
Lagos, 102
Malmo, 16
Manaos, 31 4 c.
Mauritius, 75 8
Melbourne, 95
M. Video, 17 3
Montreal, 725 2
Old Calabar, 20
Para, 33
Paris, 190 cs.
Pt. Elizabeth, 7
Pt. Natal, 275
Quebec, 400
Rio de Janeiro, 170
Sagua la Grande, 20
St. John's. N'fd., 10
St. Petersburg, 500 5 c.
San Luis de Caceres, 63
Stockholm, 256
Souris, 400
Trinidad, 10
Varna, 600
Victoria, B. C., 160
Wellington, 37

Salt Cake—
Antwerp, 120 t. £156
Delagoa Bay, 10 25
Terneuzen, 200 250

Saltpetre—
B. Ayres, 2 c. £10
Maceio, 2 t. 10 55
Savanilla, 6 2 3 q. 127

Sheep Dip—
B. Ayres, 29 t. 5 c. £773
Melbourne, 50 kgs. 450 dms. / 75 cks. 460
New York, 2 t. 10 83
Punta Arenas, 19 10 3 q. 531
Rangoon, 73 dms. 13
Sydney, 14 14 218

Soap—
Alexandria, 60 bxs. / 20 cs.
Algoa Bay, 1,306 82
Antwerp, 152
Barbadoes, 700
Bombay, 1,710 49
Burutu, 2
Calcutta, 5 250 bdls.
Callao, 15 8
C. C. Castle, 50
Cape Palmas, 60
Cape Town, 100 14
Cardenas, 115
Chama, 100
Colombo, 2
Conakry, 310
Constantinople, 6 brls.
Dixcove, 100 12 cs.
Durban, 120
Egwanga, 560
Elmina, 100
Gaboon, 10
Genoa, 228
Gibraltar. 930
Hamburg, 10
Hong Kong, 2,811
Honolulu, 1
Johan'esburg, 1,000
Kimberley, 75
Lagos, 859
Las Palmas, 337
Lima, 2
Macassar, 500
Madras, 60 30
Manaos, 2,250 1
Mauritius, 3
Montreal, 501
Natal, 733 16
New York, 36
Old Calabar, 1,000
Oporto, 10
Osaka, 11
Ottawa, 150 18
Para, 3
Penang, 50 30
Pt. Natal, 25 150
Pt. Said, 20
Pretoria, 508
Principulca, 90
Quittah, 40
Rangoon, 428 4
Rawal Sindi, 25
Rotterdam, 515
Sagua la Grande, 25
St. John s, N'fd, 100 10
St. Lucia, 625
Salt Pond, 270
Savanilla, 4
Shanghai, 10,393
Sherbro, 2
Singapore, 2,014
Sydney, 6,006
Teneriffe, 445
Tientsin, 200
Toronto, 6
Transvaal, 150
Trinidad, 1,943
Ukaka, 50
Valparaiso, 1
Vera Cruz, 6 pks.
Vigo, 6
Warri, 100

Soap Lyes—
Hamburg, 25 t. 14 c. 2 q. £105

Soda—
Carril, 10 dms.

Soda Ash—
Acajutla, 30 cks.
Antwerp, 500 bgs. 17
Barcelona, 77
Bombay, 20
Boston, 400 52 tcs. 30
Brisbane, 293
B. Ayres, 70
Calcutta, 325 kgs. 225
Callao, 15
Dunedin, 20 30
Ghent, 234 bgs.
Hamburg, 6 brls.
Hobart, 32
Johannesburg, 80 kgs.
Launceston, 20
Leghorn, 120 bgs. 20
Libau, 200
Madras, 30 kgs. / 10 bgs.
Maranham, 88
Melbourne, 680
M. Video, 25
Montreal, 350
Newfairwater, 500
New York, 152 48 tcs. 16
Oporto, 6
Philadelphia, 77 33
Piræus, 50 brls.
Rio G. do Sul, 200
Rotterdam, 440 3
Savanilla, 5
Seville, 15
Smyrna, 50
Sourabaya, 50
Talcahuano, 75
Toronto, 104
Vera Cruz, 25
Wellington, 196
Winnipeg, 112
Zante, 77

Soda Crystals—
Adelaide, 67 brls.
Alexandria, 51
B. Ayres, 30 cks.
Cape Town, 40 kgs. 25
Johannesburg, 40
Malta, 100
M. Video, 43 100 117 sks.
Montreal, 130 bgs.
New York, 140 cks.
Philadelphia, 280
Pt. Natal, 255 kgs. 60
St. John's, N'fd. 25 30 pks.
Talcahuano, 25
Vancouver, 50 bgs.

Sodium Bicarbonate—
Akyab, 7 kgs.
Alexandretta, 20
Alexandria, 200
Antwerp, 100 bls. 9 cks.
Auckland, 574
Barcelona, 30
Bari, 15
Bombay, 375 10
Brisbane, 590
B. Ayres, 10
Cairo, 50
Calcutta, 34
Canterbury, 100
Cape Town, 60
Cartagena, 90 bgs.
Catania, 30 20
Constantinople, 20
Copenhagen, 12 dms.
Corfu, 27
Dunedin, 440
Galatz, 42 20
Gutujewsky, 200
Konigsberg, 200
Kurrachee, 770
Launceston, 7
London, 20
Lyttelton, 20
Malaga, 30 8
Malmo, 12
Marseilles, 105 40 3
Maryborough, 40
Melbourne, 1,114
Mombasa, 20
M. Video, 170 56 sks.
Montreal, 200 bgs.
Newfairwater, 56 9 cks.
Odessa, 405
Oporto, 20
Palermo, 7
Pt. Chalmers, 20
Pt. Natal, 20
Rangoon, 50 15
Rockhampton, 180
Rotterdam. 10
St. John's, N'fd., 40
Seville, 100
Singapore, 20
Stettin, 22 pks.
Sydney, 112
Trinidad, 120
Valencia, 234 6 cks.
Varna, 75
Victoria, B. C., 6
Wellington, 450 30
Winnipeg, 200

Sodium Acetate—
Vera Cruz, 2 cks.

Sodium Bichromate—
Halifax, 3 cks.

Sodium Carbonate—
Boston, 56 brls.
New York, 48
Rotterdam, 50

Sodium Chlorate—
Boston, 100 bgs.
Philadelphia, 25 kgs.

Sodium Hyposulphite—
San Francisco, 200 kgs.

Sodium Prussiate—
Philadelphia, 26 cks.

Sodium Stannate—
Bombay, 4 cs.

Starch—
Copenhagen, 5 sks.
Lisbon, 1 ck.

Sulphur—
Boston, 50 t. 2 c.
Halifax, 2 10
Montreal, 111 3

Sulphuric Acid—
Bombay, 1 t. 10 c.
Para, 1 2 1 q.

Superphosphates—
Malaga, 200 t.
Nantes, 97 12 c. 3 q.
Valencia, 420 2

Tartaric Acid—
Lady Smith, 1 c.

Varnish—
B. Ayres, 1 cs.
Iquique, 2
Lyttelton, 8
Mauritius, 1
Oporto, 2
Valparaiso, 20 dm

White Lead—
Bay of Islands, 2 cks.
B. Ayres, 14 kgs.
Calcutta, 10 t.
Lisbon, 2 cks.
Townsville, 800 kgs.

Zinc Chloride—
Oporto, 2 t. 9 c. 3 q.
Piræus, 4 14

MANCHESTE

Week ending May 31st.

Caustic Soda—
Beyrout, 25 dm
Jaffa, 63
Sfax, 32 brls 20
Tunis, 50

Chemicals *(otherwise undescrib*
Basle, 10 kgs. / 2 cks.
Beyrout, 10 brls.
Lattakia, 10
Mainz, 8 kgs. / 6 cks.

Coal Products—
Aniline Colours
Beyrout, 20 cs.
Germany, 3 kgs.
Aniline Oil
Germany, 1 dm
Aniline Salt
Germany, 2 cks.
Carbolic Acid
Belgium, 50 cks.
Ludwigschafen, 19
Naphtha
Paris, 26 brls.
St. Denis, 26
Treport, 36 2 t
Naphthol
Germany, 2 cks.
Naphthylamine
Germany. 24 cks.
Paranitraniline
Germany, 8 kgs.
Pitch
Belgium, 405 t. 5 c.
Tar Oil
Treport, 2 cks.

Colours—
Jaffa, 1 brl.

Copperas—
Alexandria, 69 brls.
Beyrout, 10
Lattakia, 10

Disinfectants—
Bombay, 40 cks. 1 cs.

Gamma Acid—
Germany, 8 cks.

Glue—
Holland, 15 cks.
Linseed Oil—
Beyrout, 7 brls
Jaffa, 17
Paint—
Alexandria, 3 brls.
Beyrout, 1 kg. 5
Jaffa, 22 2 30 dms.
Paraffin Wax—
Bahia, 5 cs.
Monterey, 100 bls.
Tunis, 5 bgs.
Red Lead—
Jaffa, 1 brl.
Salammoniac—
Beyrout, 3 brls.
Tunis, 2
Soap—
Bombay, 5 cs.
Soda Ash—
Beyrout, 95 brls.
Sodium Bicarbonate—
Beyrout, 100 kgs.
Mersyne, 20
Tunis, 28
Sodium Naphthionate—
Switzerland, 22 cks.
Sodium Silicate—
Sfax, 30 brls.
Starch—
Alexandria, 50 bgs.
Turpentine—
Alexandria, 99 dms.
Jaffa, 4
Varnish—
Beyrout, 3 cs.
Zinc Chlorate—
Holland, 20 cks.

HULL.

Week ending May 27th.

Alkali—
Bremen, 5 cks.
Riga, 105 100 bls.
Ammonium Sulphate—
Gothenburg, 200 bgs.
Palermo, 589
Basic Slag—
Drontheim, 50 t.
Stettin. 307
Bleaching Powder—
Amsterdam, 30 cks.
Caustic Soda—
Riga, 35 dms.
Venice, 100
Chemicals (*otherwise undescribed*)
Amsterdam, 49 cks.
Copenhagen, 1
Gothenburg, 5 cs.
Hamburg, 14 116
Hango, 1
New York, 15
Riga, 100
Rotterdam, 81
Stettin, 82 pks.
Stockholm, 1 32
Coal Products—
Creosote
Rotterdam, 5 cks.
Pitch
Antwerp, 60 t.
Bergen, 50 cks.
Rouen, 175 t.
Tar
Amsterdam, 26 cks.
Dunkirk, { 208 t. / 50 cks.
Konigsberg, 3
Rotterdam, 16
Stettin, 10
Cottonseed Oil—
Amsterdam, 10 t. 1 c.
Antwerp, 8 13
Bremen, 2 2
Copenhagen, 3 10
Dunkirk, 11 16
Gothenburg, 14 4
Hamburg, 4 3
Harlingen, 6 10
Rotterdam, 19 2
Stockholm, 76 13
Dyestuffs (*otherwise undescribed*)
Hamburg, 4 cks.
Glue—
Drontheim, 10 bgs.
Hamburg, 3 cs.
Guano—
Hamburg, 100 t.
Linseed Oil—
Aalesund, 18 c.
Amsterdam, 3 t. 10
Antwerp, 7 13
Copenhagen, 1 16
Drontheim, 4 7
Hamburg, 6 13
Rotterdam, 5 12
Stockholm, 19
Manure—
Rotterdam, 709 bgs.
Painters' Colours—
Amsterdam, 15 cks. 3 cs. 17 dms.
Antwerp, 30
Bergen, 1 18 pks.
Catania, 4
Copenhagen, 13
Drontheim, 7
Dunkirk, 1 dm.
Ghent, 1 24
Gothenburg, { 25 pks. / 24 dms.
Hamburg, 3 1
Riga, 26
Rotterdam, 1
Rouen, 6
Stettin, 26 6
Stockholm, 12
Venice, 15
Soap—
Amsterdam, 200 cs.
Hamburg, 3
Stettin. 1
Stockholm, 1
Tallow—
Rotterdam, 1 ck.
Varnish—
Antwerp, 4 dms.
Ghent, 1 cs.
Konigsberg, 2 cks.
Norrkoping, 2
Stettin, 22

GLASGOW.

Week ending June 1st.

Acids—
Bombay, £1,530
Ammonia (Anhydrous)—
B. Ayres, £619
Ammonium Carbonate—
Stockholm, £62
Ammonium Sulphate—
Amsterdam, 75 t. 4 c. 3 q.
Demerara, 240 2
Trinidad, 215
Valencia, 581 5 2
Caoutchouc—
Stockholm, £25 5s.
Castor Oil—
Sydney, £46 10s.
Caustic Soda—
Brisbane, 1 t. 11 c.
Coal Products—
Benzine
Bordeaux, £74
Creosote Oil
Bordeaux, £1,800
Christiania, 9 10s.
Creosote Salt
Bordeaux, £55
Pitch
Canada, 241 t.
Danzig, 80
Tar
Bombay, £130
Calcutta, 125
Danzig, 74 t.
Karachi, 34 10s.
Tar and Pitch
Madras, £39 10s.
Rangoon, 138
Tar Oil
Antwerp, £105
Hamburg, 60
Copperas—
Bombay, 52 t. 19 c.
Karachi, 38 1
Dyestuffs—
Logwood
N.S.W. £21
Sumac Extract
Belgium, £33
Farina—
Amsterdam, £57
Bombay, 23
Gelatine—
Algoa Bay, £38
Linseed Oil—
Algoa Bay, 2 t.
Cape Town, 3 7 c. 2 q.
Havana, 3 10 2
Singapore, 5 4
Logwood Extract—
N.S.W., £40
Manganese Oxide—
U.S.A., £105
Muriatic Acid—
Bombay, £150
Nitric Acid—
Bombay, £100
Paint—
Havana, £87
Painters' Colours—
Algoa Bay, £88
Boston. 175
Brisbane, 489 18s.
Cape Town, 33
Hobart, 140
Natal, 92
N. Glasgow, 26
Picton, N.S., 22
Pietermaritzburg, 64 16
Pt. Said, 25
Rangoon, 101
Rockhampton, 89
Stockholm, 90
St. John, N.B., 53 19
Paraffin Wax—
Bordeaux, £108
Bilbao, 160
Cape Town, 163
Christiania, 60
Gijon, 20
Pasages, 95
Riga. 1,480
San Sebastian, 472
Stockholm, 150
Vigo, 20
Potassium Bicarbonate—
Christiania, £55
Madras, 68
Potassium Bichromate—
Philadelphia, £386
Potassium Cyanide—
Valparaiso, £230
Red and White Lead—
Algoa Bay, £135
Salt—
Brisbane, 254 t. 9 c.
Salt Cake—
Antwerp, 249 t. 19 c. 1 q.
Sheep Dip—
B. Ayres, £155
Soap—
Rangoon, 1 t. 10 c. 2 q.
Singapore, 3 9 2
St. John's, N'd., 1 16 3
Trinidad, 8 13 2
Starch—
Rotterdam, £330
Sulphite of Lime—
Ootacomund, £21
Sulphuric Acid—
Bombay, £1,350
Rangoon, 324 19s.
Tallow—
Rotterdam, 6 t. 3 c. 1 q.
White Lead—
Cape Town, £75
Sydney, 21 10s.

TYNE.

Week ending May 27th.

Alkali—
Amsterdam, 10 t. 15 c. 2 q.
Rotterdam, 11 11 2
Alum Waste—
Copenhagen, 35 t. 1 c.
Ammonium Carbonate—
Aarhuus, 16 c. 3 q.
Halmstadt, 1 t. 5
Antimony—
Antwerp. 18 c.
Barium Binoxide—
Hamburg, 7 t. 15 c. 1 q.
Rouen, 10 15
Barium Carbonate—
Antwerp, 5 t.
Hamburg, 304 13 c. 2 q.
Rouen, 23 14 1
Bleaching Powder—
Antwerp, 10 t. 6 c.
Copenhagen, 3 10 1 q.
Gothenburg, 20 2 2
Hamburg, 15 4 1
Helsingfors, 74 19 1
Odense, 1 1 2
Rotterdam, 12 14 1
Caustic Soda—
Antwerp, 9 t. 17 c. 1 q.
Christiania, 5 16
Helsingfors, 133 14 3
Odense, 1 14 3
Coal Products—
Pitch
Rouen, 20 t.
Farina—
Bergen, 4 t.
Linseed Oil—
Ergasteria, 8 c. 1 q.
Litharge—
Hamburg, 15 t. 4 c. 1 q.
Magnesia—
Antwerp, 1 t. 11 c. 1 q.
Paint—
Antwerp, 6 c.
Bergen, 11 3 q.
Christiania, 3
Gothenburg, 6 2
Helsingfors, 2 t. 17
Painters' Colours—
Rotterdam, 1 ck.
Red Lead—
Christiania, 1 t. 1 c. 1 q.
Copenhagen, 5 11 1
Gothenburg, 8 19 1
Hamburg, 28 8 3
Helsingfors, 8 19 3
Leghorn, 5 14 2
Salt—
Gothenburg, 4 c. 2 q.
Soap Lyes—
Hamburg, 10 dms.
Soda—
Christiania, 4 t. 8 c.
Helsingfors, 20 15
Rotterdam, 10 10 3 q.
Soda Ash—
Gothenburg, 5 t.
Hamburg, 1 19 c. 3 q.
Helsingfors, 7 2
Sodium Hyposulphite—
Hamburg, 6 t. 17 c. 2 q.
Sulphur—
Helsingfors, 300 t. 19 c. 3 q.
White Lead—
Helsingfors, 14 c. 1 q.
Zinc White—
Ergasteria, 2 c.

GOOLE.

Week ending May 24th.

Chemicals (*otherwise undescribed*)
Amsterdam, 20 cks.
Antwerp, 2 dms.
Rotterdam, 5
Coal Products (*otherwise undes.*)—
Antwerp, 27 cks 2 cs.
Boulogne, 50
Dunkirk, 90
Rotterdam. 9 3
Coal Products—
Pitch
Antwerp, 599 t.
Dyestuffs (*otherwise undescribed*)
Hamburg, 6 cks.
Rotterdam, 45
Painters' Colours—
Amsterdam, 10 cks. 7 btls.
Dunkirk, 1 cs.
Ghent, 1

GRIMSBY.

Week ending May 27th.

Alkali—
Antwerp, 1 cs.
Dieppe. 12
Rotterdam, 8
Caoutchouc—
Malmo, 2 bs.
Coal Products (*otherwise undes.*)—
Dieppe, 232 cks. 1 cs. 4 pks.
Hamburg, 1 142 4 btls.
Dyestuffs (*otherwise undescribed*)
Gothenburg, 1 cs.
Painters' Colours—
Antwerp, { 1 kg. / 9 cks. 2 cs. 2 pks.
Rotterdam, 21 1

PRICES CURRENT.

WEDNESDAY, June 7, 1899

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9	&	8/3
,, Glacial .. .. ,,		35/-	
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	9
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	11¾
Picric .. .. ,,	0	0	11½
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2
Tartaric .. .. ,,	0	1	0
Arsenic, white powdered .. .. nett per ton	19	5	0
Alum, loose lump .. .. ,,	4	5	0
Alumina Sulphate (pure) .. .. ,,	3	15	0
Aluminoferric .. .. ,,	2	2	6
Aluminium (Ingot metal 98/99¼ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2¾
,, = 24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3¼
,, Muriate .. .. per ton	21	0	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	12	12	6
,, ,, (grey) Hull .. .. ,,	12	7	6
Aniline Oil (pure) .. .. per lb.	0	0	4½
Aniline Salt ,, ... ,,	0	0	4
Antimony .. .. per ton	39	5	0
,, (tartar emetic) .. .. per lb.	0	0	8
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	12	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	4	2	6
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6¼
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. ,,	17/-	to	25/-
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30% A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	6½
,, 50/90 ,, ... ,,	0	0	7¼
Carbolic Acid (crude 60°) .. .. ,,	0	2	0
,, (crystallised 40°) .. .. .. per lb.	0	0	7¼
,, (liquid 95/97%) .. .. .. per gallon	0	1	0
Creosote (ordinary) .. .. ,,	0	0	3½
,, (filtered for Lucigen light) .. .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	3	0	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	4	6
Solvent Naphtha, 90% at 160° .. .. per gallon	0	0	10
Copper .. .. per ton	75	0	0
,, Sulphate .. .. ,,	26	10	0
,, Oxide (copper scales) .. .. ,,	57	0	0
Glycerine (crude) 80% .. .. ,,	24	0	0
,, (distilled S.G. 1250°) .. .. ,,	48	10	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	2	6
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	15	7	6
,, Litharge Flake (ex ship) .. .. ,,	17	0	0
,, Acetate (white ,,) .. .. ,,	23	15	0
,, ,, (brown ,,) .. .. ,,	18	0	0
,, Carbonate (white lead) pure .. .. .. ,,	18	10	0
,, Nitrate .. .. ,,	22	10	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	4	17	6
,, ,, (grey) (ex ship) .. .. ,,	8	0	0
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton	9	10	0
,, Sulphate (Epsom Salts) .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	14	15	0
,, Borate .. .. per cwt.	2	0	0
,, Ore, 70% .. .. per ton	3	10	0
Methylated Spirit, 61° O.P .. .. per gallon	0	2	0
Naphtha (Wood), Solvent .. .. ,,	0	2	10
,, ,, Miscible, 60° O.P. .. .. .. ,,	0	3	9
Oils:—			
Cotton-seed .. .. per ton	17	10	0
Linseed .. .. ,,	21	0	0
Stearine .. .. ,,	26	0	0
Phosphorus (Yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	15	0
,, Chlorate .. .. per lb.	0	0	3½
,, Cyanide, 98 % .. .. ,,	0	1	0½
,, Hydrate (Caustic Potash) 90 % .. .. per ton	22	0	0
,, ,, ,, 75/80 % .. .. ,,	17	15	0
,, Potash Hydrate Liquid 50 % .. .. .. ,,	11	10	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	2	12	6
,, Prussiate Yellow .. .. per lb.	0	0	8½
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	0
,, Muriate, 80 % ,, ... ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3½
Sodium (metal) .. .. per lb.	0	2	6
,, Carb. (refined Soda-ash) 48 % .. nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	5	0
,, ,, (Carb. Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Soda Crystals) .. .. .. ,, ,, (f.o.r. w'ks.)	2	10	0
,, Acetate (ex-ship) .. .. ,,	12	15	0
,, Arseniate, 45 % .. .. ,,	13	10	0
,, Chlorate .. .. per lb.	0	0	3¾
,, Borate (Borax) .. .. nett per ton	16	0	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton (10 ton lots)	7	12	6
,, ,, (74 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	0	0
,, ,, (60 % Caustic Soda) .. ,, ,, (10 ton lots)	6	0	0
,, ,, (pure liquor 90° Tw.) .. ,, ,, (10 ton lots)	3	10	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate (cwt. kegs) .. .. ,,	6	15	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25 % .. .. ,,	15	10	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	8	0
,, Nitrite, 98 % .. .. per ton	26	0	0
,, Phosphate .. .. ,,	10	7	6
,, Prussiate .. .. per lb.	0	0	6¼
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. ,,	3	10	0
,, Stannate, 40 % .. .. per cwt.	3	10	0
,, Sulphate (Salt-cake) .. .. per ton	1	6	6
,, ,, (Glauber's Salts) .. .. ,,	1	12	6
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	5	2	6
Strontium Hydrate, 100 % .. .. ,,	9	10	0
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	5¾
,, Barium, 95 % .. .. ,,	0	0	4
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton	6	15	0
,, (Roll Brimstone) .. .. ,,	6	0	0
,, Brimstone: Best quality .. .. ,,	4	12	6
Superphosphate of Lime (26 %) .. .. ,,	2	10	0
Tallow .. .. ,,	24	0	0
Tin Crystals .. .. per lb.	0	0	7¾
,, English Ingots .. .. per ton	120	0	0
Zinc (Spelter) .. .. ,,	28	10	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	7	10	0
,, Sulphate, Crystal .. .. ,,	7	15	0

THE

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Articles, reports, and correspondence on all matters of interest to the Chemical and allied industries, home and foreign, are solicited. Correspondents should condense their matter as much as possible, write on one side only of the paper, and in all cases give their names and addresses, not necessarily for publication. Sketches should be sent on separate sheets.

Advertisements.

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WHEN WILL THE PETROLEUM BILL COME?

IT is now three months since the wavering members of the House of Commons were induced to side with the Government and form a majority to reject Mr. Reckitt's Bill; and the troublesome members were hushed by Mr. Collings' promises of a Government measure which was "in a forward state of preparation," and "soon" to be introduced, and which would deal fully with the questions at issue; and yet only last week the Home Secretary had the assurance to state that "he was not at present in a position to say when the Government Bill dealing with petroleum would be introduced, or to state the nature of its provisions."

We are familiar with the convenient delays which are so skilfully manipulated by the S. O. Co. in the States, in order to benumb the senses of the public or the authorities, whenever they are roused to a state of activity which even dollars cannot allay, but we did not know the members of the House of Commons could be hoodwinked in this way. After three months not a word or a hint is forthcoming to reassure those who feel the responsibility of sacrificing 100 lives a year that this long promised Bill has progressed another inch towards completion.

We have always done our best to keep this question a non-political one, but in order to save his over-roasted chestnut from the fire Mr. Collings made a purely political appeal to the House to support him and reject Mr. Reckitt's Bill. When one or two members of Parliament discussed this flash-point matter with their constituents they were howled at for making it a political question. The real cause of the howling was the burning desire for secrecy and seclusion, so that smouldering public opinion might not be fanned into flame by free ventilation. That would never do. Too many thousands of dollars have been made, up to now, by nursing the ignorance and ineptitude of the public to let the game drop. However, Mr. Collings, of his own choice and by his own action has made the question irrevocably a political one—and it shall be. If he and his predecessors did not like to hear inconvenient evidence in Committee he shall have it rammed down his throat in the House. Even when his Bill does come, he will have to justisfy his premises, and there will be a few nice little questions concerning the "doctoring" of the Foreign office report on the American standards of safety for oil, to suit the arguments of Mr. Collings and his Home Office backers. We do not think he will be able to explain them away with any greater volubility or lucidity than he explained to the House last March what the "flash-point" of oil really was; though he may succeed in adding to the evidence of his astounding ignorance of the question he is trying to legislate upon. There will also be a few public statements made by Dr. Dupré and others to be dealt with before his hole-and-corner Bill is done with—statements which violated the rights of the public to a fair hearing, and forecasted the tenour of the

Government Bill before the Committee of *Inquiry* had even concluded the taking of evidence.

Petroleum is now being used for laying dust on the American railroads, which we are expressly told is of a very high flash-point. For such open-air purposes why don't they use the all-sufficient and safe (?) 73°F. compound, which the Government would continue to sanction as being safe to burn in lamps in heated cottages and confined spaces in Great Britain? If the American refiners can produce (as they have done) 2,000,000 gallons of this high test oil for a *trial* of its efficiency only, why can't we have high-test oil here as well? The cost bogey will hardly hold good this time, as the price of this oil, according to the figures of Mr. Consul Fraser, works out to 1·08d. per gallon. We know that in crossing the Atlantic the concoction shipped from New York as "export oil" (which the Americans will not have for their own consumption) changes into Tea Rose, Royal Daylight, or some other fancy-named oil, but this oil could hardly change to 8d. per gallon by its sea voyage, we should think. If Mr. Collings' Bill survives this and other depreciating facts, and the S. O. Co., comes off victorious, Mr. Collings will find petroleum forming a formidable plank in the platform of his opponents at the next election.

END OF THE CHESHIRE SALT SCHEME.

As briefly recorded in our last issue the important scheme which has long been simmering in the minds of many Cheshire salt manufacturers has unexpectedly collapsed. For some time fierce competition has been waged in the salt world, and manufacturers have been obliged in consequence to put their products on the market at almost ruinous prices. Attempt after attempt has been made to secure something like uniformity of rates and stability in the trade, and a short time ago there was every prospect of a salt combine, known as the Salt Office, Limited, bringing about the desired result. This organisation was, however, but short-lived, and there were secessions which practically wrecked the scheme.

The next and latest movement was a proposal to found a Cheshire purchasing company, to consist of representatives of the Cheshire salt trade, the objects being to purchase all makes of salt, and to guarantee to take from the Cheshire manufacturers certain quantities at periodically fixed prices. In these latter respects the Company differed from the Salt Office combine, as the combine gave no guarantee as to quantity or price. Negotiations have been vigorously prosecuted with the idea of consummating the scheme and bringing it into immediate operation, the depression at the present time being keenly felt by all connected with the salt trade. Had the organisation been carried into effect, it would, it is urged by the promoters, have resulted in the consolidation and betterment of the trade in Cheshire. All, or at any rate the majority, of the Cheshire salt makers had intimated their willingness to co-operate in the movement, and there was a rosy prospect of carrying out the undertaking. Last week, however, the Salt Union directors intimated that they had decided to hold aloof. Naturally, as the great syndicate controls the biggest portion of the salt trade of the United Kingdom, the scheme, without their aid and support, is rendered impracticable.

The decision of the Salt Union has caused quite a commotion amongst the other Cheshire manufacturers, who emphatically assert that the collapse of the Salt Purchasing Company means a continuance of unremunerative prices and an adherence to rates, which are bound to have a sinister effect upon the entire industry, more especially as there is every likelihood of the high prices for fuel being maintained. There is also, we are informed, little or no prospect of any other scheme being mooted for the safeguarding of the interests and position of Cheshire salt manufacturers.

Protection of Lead-workers in Switzerland.—An attempt has been made by the Swiss Government to reduce to a minimum the danger to health in factories where the use of lead is necessary, by strict supervision, and by instructions drawn up by Government inspectors for the guidance of workmen. The principal points of these instructions consist of injunctions respecting the observance of cleanliness, strict sobriety, and the prohibition to eat or smoke while at work. The manner in which the work is performed in these factories is supervised with a view to preventing unnecessary risk to health from carelessness or ignorance.

THE CAMPHOR MONOPOLY.

Merchants doing business in camphor will doubtless be interested in the following article from a Formosan source:—"The Bill relating to the camphor monopoly in Formosa having lately been passed by the Diet, with a sum of 1,681,434 yen appropriated towards its working funds and the expenses of the camphor offices for the present fiscal year, we understand that the monopoly system will be put in operation from July next, when the new treaties will take effect. As regards how the Government will dispose of camphor on the market, rumours are various, and no one outside of the Government seems to know anything of the matter, the strictest reticence being kept among the authorities. The *Taiwan Nichi Nichi Shimpo*, a Government organ, had a long leader on the subject in question, continuing for four days. Our vernacular contemporary enumerated three methods for consideration as the only courses left to the Government for its choice on the subject of selling camphor on the market. The first method is to sell it by public tender, but this the journal blames, as liable to abuses, such as the private combination of tenderers to beat down the price. The second is to sell it to the public at a regular price fixed quarterly or half-yearly, which the journal also thinks unadvisable, as against the acknowledged theory of economic science; for by this method the Government will, the paper thinks, generally be in the rear to work in harmony with the ever-changing economic condition of the active market. The third and last method proposed, and energetically recommended by our contemporary, as the best course under the present circumstances, is to appoint a certain big and powerful merchant, or merchants, with ample experience in the foreign trade, who will get the monopoly of receiving consignments of Government camphor on commission, and let him do the best he can on the foreign markets under the superintendence of the Formosa Government. Though the journal believes that this last method will meet with much censure and attack from the outsiders, yet it urges the Government to peremptorily proceed with what is thought best without heeding them at all. In short, the *Taiwan Nichi Nichi* thinks that a great thing can only be effected by a firm self-determination, disregarding outside criticisms, and strongly urges the authorities to adopt its theory. Seeing the opinion expressed by the Government organ, it is natural that some people have commenced to wonder if the method advocated by the journal is not the one to be shortly adopted by the Formosa Government."

ANSWERS TO CORRESPONDENTS.

Alkali.—It is to be obtained from Eyre and Spottiswoode, East Harding Street, London, E.C., for 8d., post free, 10d. The price varies annually a matter of a few pence.

H H. (Appley Bridge).—It shall have our attention. We are hoping to have one or two more to send at the same time.

J. and A.C.—Volume IV. appeared in the Special Issue, Jan. 28, 1899, a copy of which was sent.

J. M. and Co.—You will find all the home makers we know in the "Chemical Manufacturers' Directory" (Simpkin Marshall, London, 2s. 6d.). For foreign, we may mention Gillet et fils, Usine du Plan de Vaise, Lyons, France, and Everaert Frères, Louvain Belgium, as best for glacial.

R.E.W. (Bosnia).—"Oil, Paint, and Drug Reporter," 100, William Street, New York ($6 per year); and "Engineering and Mining Journal" (15 cents each), P.O. Box, 1,833, New York, under heading of "Industrial Notes."

Fatal Sewer Accident.—At Pemberton, near Wigan, last week, Mr. S. Brighouse, county coroner, opened the inquiry relative to the death of Thomas Dickinson, 63, of 25, Prescott-street, Wigan; James Houghton, 33, of 27, Coop-street, Wigan; and Peter Youde, 24, of 6, Water-street, Wigan, who had been suffocated in a manhole connected with the Wigan Corporation's outfall sewer. Mr. J. J. Charnock (Town Clerk) and Mr. William Bolton (borough engineer) represented the Wigan Corporation. The Coroner stated that the three men went to a manhole of the Wigan Corporation sewer at Pemberton for the purpose of cleaning it out. No sooner had one of the men descended the shaft than an alarm was raised, and the other two men also went down the manhole, and were lost. A collier named Charles Baron arrived on the scene, and when he was endeavouring to recover the men he was overcome by the gas, and he had to be dragged out by a boathook and a rope. Baron was in an unconscious condition, and artificial respiration was resorted to for upwards of an hour, Baron being afterwards removed to his home. In the meantime the bodies of the three men who had been suffocated by the sewer-gas were recovered. Mr. Bolton, borough engineer, deposed that the sewer was made eighteen years ago, and Dickinson had been engaged in cleaning the manholes out since that date. Previous to the fatality witness never thought any danger existed. To his knowledge no chemical works drained into the sewer. Dr. Berry, Medical Officer of Health for Wigan, gave evidence. He expressed the opinion that the gas had generated locally through stirring up the deposit in manholes, and that the deaths were caused by carbonic acid gas. The jury returned a verdict of accidental death, and did not attach any blame to the Corporation.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Manufacture of Iron and Steel. R. Morris and W. T. Gent. 11,141. May 29.

Reclaiming Rubber Waste. A. J. Boult. 11,159. May 29.

Electrolytes for the Deposit of Metals. P. Marino. 11,166. May 29.

Improvements in Compounds for Battery Solutions. H. Blumenberg. 11,244. May 30.

The Treatment of Wood with Solutions for Rendering it Non-flammable. H. V. Simpson. 11,333. May 31.

Preventing Incrustations in Boilers. J. L. M. A. Reis. 11,367. May 31.

Improvements in Evaporating Apparatus. J. McNeil. 11,399. June 1.

An Improvement in Electrolytic Apparatus. J. G. A. Rhodin. 11,422. June 1.

Improvements in the Manufacture of Acetic Acid. United Alkali, Co., Ltd., and M. Muspratt. 11,434. June 1.

Purification of Illuminating Gas. The Read Holliday Acetylene Co., Ltd., W. Cardno, and H. Arundel. 11,483. June 2.

Manufacture of Polysulphides of the Alkaline Metals. A. D. Parker. 11,521. June 2.

Production of Superoxide of Magnesium. A. J. Boult. 11,534. June 2.

Extracting Precious Metals from their Ores. The Golden Link Consolidated Gold Mines, Ltd., and H. J. Phillips. 11,542. June 2.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Process of and Apparatus for the Extraction and Decolourisation of Fatty Bodies. J. C. E. Bataille, 22, Square Street Pierre, Douai, Nord, France. Eng. Pat. 18,694. August 31, 1898.

The novelty of this patent lies in the apparatus employed and the working cycle. There are seven figures showing the mechanical arrangements. A series of extractors is used, which are provided with vertical pendant tubes, to the interior of which steam is admitted to heat the meal being extracted. The decolourisers are practically the same as the extractors in construction, only they are higher, of less diameter, and are packed with a suitable filtering and decolourising material. Only half the number of extractors in a series is used at a time, and the system of working a batch of twelve is described at length. The chief feature is that when the solvent has once been circulated by the pump the circulation is kept up by the pressure of the vapourised solvent which is attained in the first extractor. The meal is thus heated to 110° or 120° C., and on admitting dry steam to drive out the solvent no condensation of steam takes place, so that a dry friable meal free from solvent results.

Production of Chromic Acid by Electrolytic Oxidation of Solutions of Chromium Oxide Salts. O. Imray, Chancery Lane, London, W.C. (communicated by Farbwerke, vormals Meister Lucius and Brüning, Höchst a/Main, Germany). Eng. Pat. 15,724. July 18, 1898.

The electrolyte is prepared by dissolving chromium sulphate in sulphuric acid. The highest state of conductivity is attained by preparing a solution from 100 grams. Cr_2O_3, 350 grams. of sulphuric acid, and making up to one litre. This is placed in the anode and cathode compartments of a lead-lined vessel provided with a diaphragm and lead electrodes. By the passing of the current chromic acid is formed at the anode and hydrogen given off at the cathode. A migration of sulphuric acid also takes place, causing concentration on the anode side. The chromic acid is removed and used, thereby being changed back to chromium oxide, which is returned to the cathode side, the lye at first on this side being transferred to the anode. The cathode lye is thus richer in sulphuric acid than the anode compartment, but in the second passing of the current the migration of acid to the anode side again takes place. By this circulation the accumulation of the acid in any one place is avoided.

Improvements in the Manufacture of Carbonate of Iron. Charles Hoy, Lorne Terrace, Ladybank, Fife. Eng. Pat. 7,465. April 10, 1899.

Carbonate of iron is precipitated from a solution of ferrous sulphate with an alkaline carbonate out of contact with air. The apparatus is charged with an atmosphere of carbon dioxide. The water used for solution is boiled to de-aërate it, and the washing, drying, and even packing into bottles is conducted in an inert atmosphere by air-proof elastic gloves extending into the packing chamber. There are two figures.

A Process for the Electrolytic Extraction of Zinc and other Metals from Ores or Waste containing them. J. C. Fell, 1, Queen Victoria Street, London (communicated by W. Strzoda, Zaleuze, near Kattowitz, Silesia). Eng. Pat. 24,307. Nov. 11, 1898.

The process consists in converting the zinc into a soluble form by electrolysis in an alkaline bath, and decomposing the said compound simultaneously, thus depositing metallic zinc. A 10 per cent. caustic soda solution, heated to 40° or 60° forms a suitable bath. It is claimed that all except 1 per cent of the zinc is deposited, the evolution of gas from the bottom cathodes keeping the suspended zinc-ashes in circulation.

Improvements in the Treatment of Ores for Obtaining Metals and other Products therefrom. S. O. Cowper-Coles, 39, Victoria Street Westminster. Eng. Pat. 14,137. June 25, 1898.

The ore is subjected to a "dead roast" to drive off the sulphur, as sulphur dioxide, this gas being collected. The ore is then crushed and leached with a dilute solution of sulphuric acid to remove zinc and copper. This solution is run through a bed of zinc and carbon, or zinc and iron, to remove the copper, and the zinc deposited electrolytically. The residual ore is then leached with a caustic soda lye (two or three ounces to a gallon of water), quicklime having previously been added to convert any sodium silicate which may be formed into insoluble silicate of lime, and also to keep the lye quite caustic. A solution of plumbate of soda results. The sulphur dioxide given off in the "dead roast" is passed through a closed vessel in which chalk is suspended. Carbon, and sulphur dioxide gases are thus produced, which are passed through solutions of plumbate of soda. In the first solution lead sulphite is precipitated, which can be used as a pigment; in the second white lead is precipitated. The temperature should be about 80° C. Of course, the lead can be deposited from the plumbate by electrolysis or the solution evaporated to form litharge. The ore is finally leached with a solution of potassium cyanide to dissolve the silver and the solution electrolysed.

Improvements in Obtaining Alumina or Ferric Oxide or Mixtures thereof. J. T. Hewitt, 65, Silverdale Road, Sydenham, and F. G. Pope, 92, Reigbton Road, Upper Clapton, London, N.E. Eng. Pat. 14,911. July 7, 1893.

The sulphates of the metals (iron and aluminium), or a mixture thereof, are heated to redness in acid-proof inclined pipes, in a current of superheated steam, until the acid is expelled as much as desired. The tubes may be horizontal, the sulphates being moved by a conveyor. The steam, laden with acid vapour, is condensed, the strength of the product depending more or less on the temperature of the condenser. A condensed acid of 1·5 to 1·6 specific gravity is useful, as it serves to form aluminium sulphate from aluminous minerals.

GOLD OUTPUT IN THE RAND.

ANOTHER RECORD.

THE output from the Witwatersrand district during the past month (in bullion ounces), as cabled by the Chamber of Mines of the South African Republic, amounts to 444,933 oz., as against 439,111 oz. for April, and 344,160 oz. for the corresponding month of 1898. From the outside districts 21,519 oz. are reported, as against 21,238 oz. for April, and 20,856 oz. for the corresponding month last year. The total return, therefore, made to the Chamber amounts to 466,452 oz., as compared with 460,349 oz. for the previous month, an increase of 6,103 oz. The following are the monthly returns from the Rand district alone since the beginning of 1895:—

	1895.	1896.	1897.	1898.	1898.
	oz.	oz.	oz.	oz.	oz.
January	177,463	148,178	209,832	313,826	410,145
February	169,295	167,018	211,000	297,975	404,335
March	184,945	173,952	232,067	325,907	441,578
April	186,323	176,707	235,698	335,125	439,111
May	194,580	195,008	248,305	344,160	444,933
June	200,941	193,640	251,529	344,670	—
July	199,453	203,873	242,479	359,343	—
August	203,573	213,418	259,603	376,911	—
September	194,764	202,561	262,150	384,080	—
October	192,652	199,889	274,175	400,791	—
November	195,218	201,113	297,124	393,310	—
December	178,428	206,517	310,712	419,504	—
Total	2,277,635	2,281,874	3,034,674	4,295,602	2,140,102

ROCKEFELLER'S WAY TO WEALTH.—Standard oil is going into copper as well as iron. Mr. Rockefeller says any man will prosper who takes the Lord as his partner. He has proved his theory. We make no doubt that King David was anointed with the original package of Standard oil.—*The Mexican Herald.*

Our Book Shelf.

Thirty-fifth Annual Report on Alkali, etc., Works. Being the report for the year 1898 ; pp. 143. London : Eyre and Spottiswoode. 1899. (8d.)

There is ample evidence in this report to show that every care is being taken to secure the greatest possible freedom from atmospheric pollution by chemical and allied works, and also that the care exercised effects the desired end in a satisfactory manner. There were two prosecutions, one for non-registration.

There has been a decrease of six in the number of works registered, but the number of processes under inspection has increased by fourteen. The following are the chief changes since 1897 :—Alkali manufacturing processes show a decrease of one, and salt manufacture a decrease of four. Sulphuric acid works have increased by two, chemical manure works by three, sulphate and muriate of ammonia works by eleven, chlorine and bleach by one, and cement by four. The average escape of hydrochloric acid gas from alkali works was 0·090 grains per cubic foot, of chamber exits 1·177 grains per cubic foot ; while for all chimneys expressed as grains of SO_3 per cubic foot 0·764, against 0·788 in 1897. This improvement, it should be noticed, has been achieved although the district inspectors have made nearly 700 more visits and over 550 more tests than in 1897.

In addition to statistical matters many topics of interest are referred to in the report, among which special mention should be made of the experiments on the quantitative estimation of hydrochloric acid in chimney gases, and the testing of acid escapes from vitriol-rectifying plant, the researches of Mr. Porter in this latter direction confirming the opinions expressed in the last report (*C. T. J.*, Nos. 586 and 589, pp. 102 and 148). At the same time, the study of this question has indicated the necessity of considering further the method of collecting the gases in vertical flues with a downward current. There is an appreciative account of the Kessler rectifying process.

Sulphate of ammonia manufacturers will do well to study the remarks on the cooling of the gases from the saturator. We are pleased to record the fact that the chief inspector has now completed his personal tour of inspection to all the works (179) engaged in the manufacture of vitriol.

The report concludes with a wise reference to the responsibilities of *workmen* under the Alkali, etc., Acts, which should prove helpful to managers in the maintenance of discipline in works—particularly those engaged in the allied scheduled industries.

Practical Methods of Urine Analysis. By ————— ; pp. 58. Illustrated. London : "Chemist and Druggist." 1899. (1s. 6d.)

This booklet seeks to provide pharmacists hitherto unacquainted with urine analysis with a practical account of the tests they will have to make in performing an analytical examination. It is written by a pharmacist, and we have succeeded in learning what the price is, though no advice of this all-important point was sent with the book. As far as practicability goes the brochure is all that it seeks to be, the selection of methods being carefully restricted so as not to put any undue strain upon the resources of the pharmacist's "Analytical Department." Nevertheless, despite the inclusion of some helpful notes on the composition of normal and abnormal renal secretions, we do not think the book will qualify the majority of pharmacists to analyse and *report* upon a urine, though it may help some to capture many stray half-crowns. The justification or otherwise of the booklet from an ethical point of view is not for us to adjudicate upon, though we fancy the opinions of the Institute of Chemistry and the Society of Public Analysts would cause the author to suffer severe inflammation of the auricle, particularly in the regions of the helix, anti-helix, and lobule.

Outlines of Industrial Chemistry. By F. H. Thorp. Illustrated ; pp. 541, including index. London and New York : The Macmillan Co. 1898. (15s. net.)

This work professedly aims at being a text book to students who are following a college course of lectures on industrial chemistry, and nothing more. It seems to us to be composed of a series of lecture skeletons, and with so many adequate works of this nature in existence we do not see any great need for the appearance of this particularly. It deals with all the heavy chemical manufacturing processes, fertiliser manufacture, cements, glass and china, pigments, distillation of wood, tar and oils ; soaps, brewing, sugar, explosives, paper, leather, and glue, as well as many minor processes. Consequently, all these have to be treated very briefly in the space of 528 illustrated pages, and the result *is a cursory, and* not altogether truly representative, digest of the *industries reviewed. Thus, under sulphuric acid,* the subject of *concentration—which is of growing importance—is* disposed of in a very *short space, and then only comparatively* ancient methods are mentioned. The section on chlorine manufacture is fairly comprehensive ; but a little farther on—under ammonia—there is evidence of very limited knowledge of English industrial methods of gas-liquor distillation. Brewing affords another glaring elipsis in regard to hop-producing centres, Germany, France, and America being named to the entire exclusion of the widely known Kentish and other English hops. Under the bibliography of Paper we find no reference to Cross and Bevan's standard work "Cellulose," which is two years ahead of all the other books named, with the exception of Hoffman's well-known Treatise. Among several minor points we might mention that "Willesden" paper is spelt with one "i" and two "e's," not two "i's."

The work will afford an excellent basis for lecturers who have to lecture on industrial chemistry without much practical knowledge (and they are not without numbers), provided they personally pay an intelligent attention to detail ; but we cannot advise the student to confide even his elementary training to this one book in particular.

TREATING MANCHESTER GAS-RESIDUALS.

A MANUFACTURER'S PROPOSITION.

A SUBJECT of great interest to residents in the Miles Platting district was brought before the City Council last week. A short time ago a deputation from that locality waited upon the Gas Committee of the Corporation, and requested that, instead of allowing private firms to manufacture sulphate of ammonia from the bye-products from the city gasworks, the Corporation itself should undertake the work. At length the Committee recommended the Council to apply to the Local Government Board for sanction to a loan of £25,000 for the construction of works for the manufacture of the article at the Bradford Road gasworks.

Alderman Gibson, chairman of the Gas Committee, in submitting the recommendation to the Council, by whom it was approved, read the following letter which he had received from Messrs. Hardman and Holden, Ltd., which was dated June 5th, and signed by Mr. John J. Holden, chairman of the Company :—

Gentlemen,—The time between this and Wednesday next, when the Council will consider the proposition of your Committee for making sulphate of ammonia is too limited to allow us to address you through your chairman or collectively as a committee. We therefore ask your permission to place before you a proposition which may have an important bearing on the Council's action.

It goes without saying that we have a large capital at risk, our works having been repeatedly extended to enable us to deal with the ever-increasing production of your gas-plant, and as the withdrawal from the market of your ammoniacal liquor will necessarily close a large part of such works, we would again suggest that you allow us to become your servants and make it for you.

Probably by this you know the lowest cost of manufacturing sulphate of ammonia reached by any municipality of importance in the country. Well, preferably to our works being only partially employed, with an immense increase thereby of the percentage of working and fixed charges, we are prepared to convert your water into sulphate at a considerable reduction from the lowest cost you can quote, and will be very glad to supply you with full particulars of the bases on which we will do this.

You would have no trouble, need put down no plant, may do your own selling if desired, and on the mere cost of working you can secure a considerable annual gain.

We are addressing each member of the Gas Committee to this effect, and respectfully ask you to excuse this unusual mode of communication in view of the fact that no committee meeting will be held in the interval between this and Wednesday's Council meeting.

Alderman Gibson said the letter showed great concern at the proposal of the Council to undertake this manufacture themselves. In 1895 the Committee had one solitary offer for their sulphate of ammonia, and found that they must take the price tendered or none. He held to-day as strongly as ever the opinion that the Corporation should not become a competitor with private enterprize unless private enterprize took them by the throat and said, "We will only allow you to live on certain conditions." In 1896 the Council applied to the Local Government Board for permission to work their own residuals, and although the application was strongly opposed, that permission was at length granted. The Committee were not in a hurry. They allowed the matter to rest, and no increased price had been offered from then till the present time for the ammoniacal liquor. Now, however, these gentlemen came and said, "Oh, good gracious, we can make the sulphate for you ever so much cheaper than you can do it for yourselves." If the Council gave the Committee power to borrow this money they would certainly not use that power unless they found it desirable to do so. Whether that would be the case remained to be seen when the prices offered by the firm in question were submitted to them.

THE CAUCASIAN PETROLEUM TRADE.

THE exports of petroleum products from the Caucasus during 1898 exceeded those of the year 1897 by 63,185 tons. Statistics in respect to the imports of petroleum to the United Kingdom are kept and quoted in barrels, so, for the sake of uniformity, Russian poods have been converted into barrels of 40 Imperial gallons. The following figures show the exports of petroleum products during each month of the year 1898, in barrels:—

Month.	Petroleum.		Distillate	Lubricating Oils.			Residuum.		Solar Oil.	Total.
	In bulk.	In cases	In bulk.	In bulk.	In cases.	In barrels.	In bulk.	In barrels.	In bulk.	
January	283,703	194,567	10,890	23,618	396	7,791	23,890	1,496	1,561	547,912
February	142,217	188,211	15,326	59,764	126	8,008	16,032	1,105	...	430,789
March	214,613	190,927	28,584	56,274	102	9,206	32,950	829	22,384	555,869
April	239,681	208,024	81,238	52,757	2,133	5,430	3,317	1,779	...	594,359
May	203,952	141,865	19,297	89,916	498	9,131	38,692	317	15,179	518,847
June	152,274	219,076	74,055	46,688	90	12,517	9,042	798	...	514,540
July	214,312	130,419	93,177	36,658	11	7,928	13,726	2,367	13,507	512,105
August	313,003	177,694	80,779	69,793	171	7,525	24,660	981	...	674,606
September	193,363	111,623	31,652	36,154	210	8,482	...	2,312	24,723	408,519
October	317,382	143,605	26,485	95,414	...	9,036	24,951	777	...	617,650
November	293,979	179,166	128,744	30,459	180	9,728	8,945	1,293	...	652,494
December	378,055	233,208	...	58,859	...	7,055	16,459	996	19,917	714,549
Total	2,946,534	2,118,385	590,227	656,354	3,917	101,837	212,664	15,050	97,271	6,742,239

Out of this total the United Kingdom took:—Crude solar residuum, 148,609 barrels, against 42,340 barrels in 1897; lubricating oils, 98,503 barrels, against 93,420 barrels in 1897; illuminating distillate, 8,819 barrels, against 237,672 barrels; refined illuminating oils, 928,687 barrels, compared with 526,270 barrels in 1897, making a total of 1,184,618 barrels, against 899,702 barrels in 1897.

DRILLING.

An increase took place in drilling operations on the Apscheron Peninsula, the estimated cost of which was over £1,500,000, which it is stated were exclusively expended in sinking new wells. The increase in the production of oil was nevertheless not in the same proportion as the increase in the number of wells, and this is accounted for by the fact that for several years past the production has been confined to a district the area of which has not augmented, and this feature has necessitated the search for oil at greater depths, the immediate result being the increase in the cost of the oil produced. The statistical position of the wells at present is at follows:—Producing, 834; drilling, 428; deepening, 48; cleaning, 15; repairing, 85; trial pumping, 52; idle, 275; preparing, 147.

PRODUCTION.

The production of the mineral oil wells near Baku, showed a further increase during the past year; more especially was this the case in respect to oil furnished by pumping wells, although the production by fountain wells also shows a considerable increase, the total production being: for 1897, 42,246,073 barrels, and for 1898, 48,596,851 barrels.

The oil field of Sabounchi produced the largest quantity of crude oil, at the same time the production of the Balakhani oil field was also very great, over 1,500,000 poods of crude having been obtained from flowing wells situated within the limits of this field. This in itself is very important, since the wells of the last mentioned field are the oldest under exploitation, and this fact proves that they are to be depended upon in so far as concerns the future production of the Peninsula. The oil field of Romany produced a limited quantity of crude oil both from flowing and pumping wells, and the production of the field at Bibi-Eibat was principally from flowing wells.

The results attained during the year by the Baku naphtha industry, in the sphere of exports, were by no means in proportion to the success obtained in respect to the production. It is evident that as far as the latter is concerned, immense activity and energy were exhibited during the year, whereas in respect to the former an almost complete and passive submission to the existing state of the markets was maintained. This state of things was more apparent in so far as concerns the exports of oil products to foreign countries, the attention of the producers during the period under discussion being principally concentrated on the sale of residues and crude oil for fuel purposes to Russian markets. The price of this commodity rose to unprecedented limits, which is to be explained by the enormous increased demand that existed for liquid fuel, in consequence of the fact that the coal industry has not yet attained that high standard of development which is required in order to enable it to furnish supplies of coal in proportion to the ever-increasing requirements of the large number of railways, steamship companies, and factories in Russia proper, which so largely contribute towards the consumption of fuel of every description. The foregoing circumstances, combined with the technical superiority of the liquid fuel, have tended to maintain the reputation of the latter, and the petroleum industry, restricted in the development of the manufacture of naphtha into light oils, was compelled to reach forward to meet the demand of the home markets.

The limits attained by the high prices at which the raw material and residues were sold during the month of December last, demonstrate that an equilibrium has been reached between the demand for, and the supply of liquid fuel, since a further rise of any importance would, without doubt, have the effect of reducing the area of consumption for liquid fuel, and would compel consumers to revert to coal or wood for fuel.

The price of kerosene is principally regulated by the export trade, since the demand for it for Russian consumption only increases at the rate of from 1,500,000 to 2,000,000 poods (36 lbs avoir.) per annum, its development being considerably hampered by the limited purchasing power of the consumer, combined with the heavy excise duty levied, and the absence of cheap means of transport to the majority of the consuming centres; whereas the export trade under favourable circumstances could be developed to a very high standard of prosperity, and thus call forth a greater activity in so far as concerns the manufacture of light or illuminating oils. In this respect foreign petroleum markets are an important factor in the Russian oil industry. The producer should, therefore, regulate the manufacture of kerosene according to the demand that exists for it abroad, but here again the competition of American oil producers affects the markets to a very great extent, and causes prices to fluctuate considerably, so that the stability of the foreign trade cannot be relied upon. This uncertain state of things is also increased to a great extent by the influence of the ever-changing tariff on the Trans-Caucasian Railway, which in itself forms a formidable barrier to the organisation, on a sound footing, of the kerosene trade with foreign countries. As an instance of the effect produced by the continued uncertainty of the rates likely to be charged by the railway for the transport of kerosene from Baku to Batoum, when it became known that from February 1st, 1899, the rate of transport between these two points was to be again raised from 12 to 19 copecks per pood (25 c = 8d.), the exports of kerosene from Batoum, which were maintained throughout the year at an average rate of about 3,750,000 poods per month, suddenly took a jump, and in November reached 5,200,000 poods, and 5,900,000 poods in December. This sudden increase in the demand for illuminating oils was brought about by the fact that the exporters were compelled to buy up all the kerosene they could procure in order to fulfil the contracts they had made abroad at certain rates, which if allowed to hang over until the raising of the tariff, would involve them in much heavier losses than would be entailed by paying an enhanced price for the kerosene on the spot. Luckily for the trade, however, the raising of the tariff has been postponed for a period of six months on condition, however, that in the event that an advance of the price of kerosene takes place by the expiration of the term, the tariff question will have to be again reconsidered. The rate for the transport of kerosene between Petrovsk and Novorossisk on the Vladikavkaz Railway has been fixed at 14½ c. per pood.

PIPE-LINE.

The work on the pipe-line between Mihailovo and Batoum is progressing, although very slowly. Pipes are lying on the side of the railway which the line is to follow, covering a distance of 216

versts (144 miles), between the above-mentioned two points. In many places, for lengths of several hundred yards, the pipes have been connected, and are now being lowered into a trench about 2 feet 4 inches deep, which will be covered over with earth in order that the pipes should be protected from the cold and hot weather. The pumping stations are to be situated at the stations of Mihailovo, Samtredi, and Supsa, the distances between these stations being 118 versts (78 miles), 49 versts (32 miles), and 49 versts (32 miles) respectively. A fall of 2,200 feet occurs between Mihailovo and Samtredi, and a greater distance has therefore been allowed on this section than between the pumping stations of Samtredi-Supsa and Supsa-Batoum, where the country is quite flat. The pipes are of 8-inch diameter, and they were ordered from three different tube works in Russia. The pumps for the three pumping stations have been furnished by the Worthington Pump Manufacturing Company, of Brooklyn. The buildings and boiler-houses are still in a backward state, although at Supsa they are now more advanced than at the other two stations. Three iron reservoirs, of the capacity of 120,000 poods each, are being erected at each of the pumping stations, and four more iron reservoirs are being added to the already-existing seven reservoirs at Batoum belonging to the State Railway. The combined capacity of the 11 Batoum reservoirs is to be 1,500,000 poods. According to present arrangements, the pipe-line is to be completed and ready for work towards the end of the present year. It has also been decided, in principle, to extend the pipe-line from Mihailovo to the station of Agh-Talia, 20 versts (14 miles), east of Tiflis.

The stocks of mineral oil products at Batoum on December 31st last were :—

Products.	Quantity. Barrels.
At wells—	
Crude	716,320
In Baku—	
Crude	1,218,620
Illuminating oils	1,146,236
Lubricating	232,105
Residuum (Astatki)	5,302,437
Total	8,615,718

THE INSTITUTE OF CHEMISTRY DINNER.

THE annual dinner of the Institute of Chemistry took place last week at the Trocadero Restaurant. Dr. Thomas Stevenson, F.R.C.P., president of the Institute, was in the chair, and among those present were the Earl of Desart, Lord Welby, Lord Brampton, Mr. Justice Byrne, Mr. Justice Cozens-Hardy, Sir John Donnelly, Sir J. Crichton Browne (treasurer of the Royal Institution), Sir H. Trueman Wood, Mr. T. H. Elliott, C.B (secretary to the Board of Agriculture), Dr. W. J Collins, Prof. T. E Thorpe (president of the Chemical Society), Professor Arrhenius (Stockholm), Professor Franchimont (Leyden), Professor W. A. Tilden, Dr. W. J. Russell, Dr. J. Hall Gladstone, Mr. W. W Fisher (president of the Society of Public Analysts), Mr. Walter Hills (president of the Pharmaceutical Society), Professor J. Millar Thomson (hon. registrar), Professor W. Ramsay, Professor Percy F. Frankland, Dr. Bernard Dyer, Dr. Frank Clowes, Professor A. G. Greenhill, Dr. R. Messel, Colonel Jocelyn, Mr. Michael Carteighe, Mr. Otto Hehner, Mr. B. E. R Newlands, Mr. R. J. Friswell, Mr. T. Fairley, Mr. E. J. Bevan, Dr. J. A. Voelcker, Mr. E. W. Voelcker, Mr. Bennett Brough, and Mr. R. B. Pilcher (secretary). After the loyal toasts had been honoured Professor W. A. Tilden gave that of "The Houses of Parliament," which was acknowledged by Lord Welby. Professor Ramsay proposed "The Learned Societies and Kindred Institutions," to which Dr. Thorpe and Sir J. Crichton Browne responded, and the Earl of Desart proposed, and Lord Brampton supported, the toast of "The Institute of Chemistry," which was enthusiastically drunk. The president, in response, said that the society had progressed from small beginnings to what he might say were great things. In 1885, they obtained a Royal charter, and since then they had continued to advance in prestige and in numbers. At the present time they had nearly 1,000 members—fellows and associates—not to speak of 180 registered students. Every member of the institute had to undergo a thorough course of systematic study and then had to present himself for an examination in the science of chemistry. They also encouraged their members to take up some allied branch of science. The examinations compared most favourably with those of the medical profession, while the institute had established a high code of ethics, which was essential for the due carrying on of any professional society. Dr. Frank Clowes proposed "The Guests," for which Mr. Justice Cozens-Hardy and Prof. Arrhenius replied.

RUSSIAN MANGANESE INDUSTRY.

A FAIRLY brisk demand, called forth by the increased consumption of manganese in the United Kingdom, America, and elsewhere, for the manufacture of steel, etc., was maintained during 1898 in the Caucasus at rates which, although seemingly remunerative, were not over-profitable for the producers in this country, who do not appear to be able to reap the benefit of an advance in prices in foreign countries, notwithstanding the fact that it costs them next to nothing to procure the ore at the mines, and that a reduction took place during the year on the cost of transport over the narrow gauge railway as far as the trunk line.

Many persons interested in this industry and trade hold that the existing unsatisfactory state of affairs would be considerably improved if a certain reduction were made by the State railway authorities in favour of the transport of the ore to Batoum, where greater facilities in the shape of harbour accommodation exist, and in consequence of which, in their opinion, vessels would charge a lower rate of freight for the conveyance of the ore by sea. There is very little doubt that the present state of the harbour of Poti is anything but satisfactory; the port is very unsafe at most times, the accommodation for shipping is exceedingly limited (only three loading berths alongside the quays), and vessels have to wait their loading turns out in the roads. The detention experienced by shipping during the past year was simply outrageous, many vessels remaining at anchor outside the harbour in a perfectly open roadstead for upwards of 40 days waiting for cargo, and under these conditions owners of steamers must naturally stipulate for higher rates of freight in order to at least partially cover themselves for the time lost by their steamers. I fear, however, that this view is not a very sound one, as we have no harbour accommodation to spare at Batoum.

After mineral oil, the manganese ore industry of the Trans-Caucasus comes next in importance. In view of this, and the large number of persons of all classes that are dependent on it as a means for earning a livelihood, it is of moment that everything that can possibly be done to diminish the disadvantages under which the industry is now labouring should be taken in hand forthwith. Only a very short time ago two British vessels that were awaiting their turn to load in the roads of Poti were driven ashore during a gale, and although one of them was successfully refloated in the course of a few days, after the arrival of the salvage steamers, the work of taking off the second ship proved much more difficult, the operations extending over a period of three weeks, and it was only thanks to the exceptional spell of fine weather (which does not often occur at this time of the year), that the efforts of the salvors were crowned with success.

The exports of manganese ore from Batoum and Poti during the years 1898-97 are represented by the following figures :—

	Quantity. 1898. Tons.	1897. Tons.
From Batoum—		
Antwerp	3,000	—
Hamburg	8,786	5,157
From Poti—		
Great Britain	77,950	68,650
France	5,100	—
Austria	2,300	—
Belgium	3,080	—
Germany	102,430	70,810
United States	47,600	42,200
Total foreign countries	250,246	186,817
Shipments to Russia	32,070	28,446
Grand total	282,316	215,263

TRADE WITH LA ROCHELLE.—The sale of British-made goods is still diminishing at La Rochelle, and will most likely continue to do so, principally owing to the protective duties, but also in some degree to the failure of manufacturers to adapt themselves to the requirements of customers. The importation of coal-tar and pitch from the United Kingdom has been reduced by about 7,000 tons, and superphosphates by 11,000 tons.

RUBBER IN ECUADOR.—It is to be noted that the increased value and demand for india-rubber has again attracted the attention of collectors to this native produce, and they have proceeded to collect it from places much more distant from the coast than formerly, and where it did not previously pay to extract the rubber on account of the expenses being heavier than the value. This has resulted in a considerable increase in the exportation. A large proportion of the rubber which previously used to go almost entirely to the United States of North America now finds its way to London and Europe. The value of rubber in the state in which it comes down from the forest has been varying between £9. to £10. the 100lbs.

THE LIQUEFACTION OF HYDROGEN.

DROGEN has been liquefied by Professor Dewar. He announced his achievement last week at the Royal Institution. Professor had been announced to deliver a "Commemoration " in connection with the celebration of the Institution's centen- Thus it was a crowded and distinguished company to whom he the news. The experiments he had to make were, he said, of a delicate and difficult nature; and would those present kindly a still? The audience strove hard to comply with this request, ery now and again the excitement and enthusiasm found individual But the misdemeanant was promptly and angrily hushed. l hydrogen, the Professor explained, was a precious and costly , excessively volatile, and it had to be preserved with great care. must always be something that would enable them to preserve it ch as possible from radiation. Therefore in his experiments he surround it with liquid air. The audience were then permitted a tube of liquid hydrogen thrown upon the screen, the lecturer ng attention to the surrounding air solidifying as a snow. In er experiment a piece of cork sank to the bottom of the liquid gen. Next, proof was afforded that the newly discovered liquid a magnetic one. The temperature at boiling point is 21 deg. te, or minus 252 deg., a temperature sufficient to give a pressure immeasurable. Still another experiment demonstrated that such ect vacuum can be produced by means of the new agent that ry distils upwards. In conclusion, Professor Dewar said he nt that the liquefaction of hydrogen was a triumph of theory as s of practice. The Professor went on to hint—though he did not ly mention figures—that the experiments leading to the discovery volved immense financial outlay. The late Duke of Northumber- the Goldsmiths' Company, Dr. Mond, Sir Andrew Noble—these any others have contributed towards the necessary funds.

IMPORTS AND EXPORTS FOR MAY.

E Board of Trade returns for the past month are decidedly satisfactory. The *imports* of chemicals are lower, but chiefly to the decrease in coal-tar dyes and indigo. In the *exports* there creases in nearly all the products, even including alkali. Salt ed oils are the exceptions.

IMPORTS OF FOREIGN AND COLONIAL PRODUCE.

Articles.	Quantities. 1898	1899.
r Ore and Regulus.....Tons	11,964	14,796
s..... ,,	62,697	59,357
..... Cwt.	37,862	50,559
..... ,,	19,623	33,919
tone ..... ,,	20,216	40,266
Tar..... £.	70,041	57,919
etre ..... Cwt.	24,782	18,038
eum ..... Gall.	12,785,918	19,839,704
ntine ..... Cwt.	16,246	23,771
..... Tons.	1,538	4,250
e of Soda ..... ,,	17,147	22,306
in Wax..... Cwt.	52,104	96,027
..... ,,	126,796	94,749
w and Stearine..... ,,	173,542	189,729
..... Barrels	6,798	2,054
ed Cake ..... Tons	27,849	35,870
Pulp..... ,,	29,830	35,354
..... Cwt.	96	594

EXPORTS OF BRITISH AND IRISH MANUFACTURES.

Articles.	Quantities. 1898.	1899.
..... Cwt.	321,355	360,315
nt .....Tons.	25,955	36 413
nd Coke ..... ,,	2,691,020	3,942,121
r, all kinds ..... Cwt.	84,273	89,763
nd Steel .....Tons.	293,641	374,374
ical Manures ..... ,,	25,980	31,672
eed ..... ,,	4,046	3,397
..... ,,	79,602	76,616

E GUAYAQUIL SOAP WORKS.—The native soap factory has nable to obtain the continuation of its exemption from duties on aterial, *and consequently is not now able to compete so success- hitherto with the foreign imported article.*

Trade Notes.

OIL AT MIDDLESBRO'.—The chairman of the Middlesbro' Town and Lands Co., Limited, states that borings for oil have been made 25 miles from Middlesbrough, and these have met with some success. If the district should become a large oil-producing district, it will have a very considerable influence upon the prosperity of Middlesbrough.

CHAMBER OF COMMERCE TESTING HOUSE.—The Manchester Chamber of Commerce has opened a new and well-equipped testing house in the Royal Exchange Buildings. The work undertaken includes the testing of yarns, cloth, and other textile materials; oil, soap, bleaching and dyeing requisites, and produce, including butter, cheese, and condensed milk. This has for some years been carried on in a comparatively small way at premises in Princess-street.

PAPER-MAKING AT NANTES.—The large quantity of pulp wood and wood pulp imported at Nantes is nearly all consumed by the huge paper mill at Chantenay, which has proved a most successful undertaking. Paper and cardboard of every description are manufactured, at prices with which it would be well-nigh impossible for British paper mills to compete. Probably the United States is the only country from whom they have anything to fear in the future, owing to the vast forests of wood suitable for paper-making available for the purpose.

AN INSOLVENT MIDDLEWICH SALT COMPANY.—In the Chancery Division, on Monday, Mr. Justice Byrne heard the case of Fleay *v.* Aman's Middlewich Salt Company, Limited. Mr. O. Leigh Clare, M.P., said this was a debenture holder's action, in which a receiver of the company had been appointed at the instance of the debenture holders. The estate was insolvent. The debenture holders had been found, and the amount due to them had been ascertained. It was now proposed that an order should be made for the receiver to pass his final account, that the amount due to him should be paid, and that he be discharged with a reference to the taxing master to tax the costs of the plaintiffs as between solicitor and client. His Lordship assented to the proposed minutes.

BELGIAN CHEMICAL TRADE.—The total value of the Belgian import trade last year was £77,103,680., against £71,781,680. in 1897. The following four countries contributed almost half the amount—viz., France, Great Britain, Germany, and Holland. France heads the list with £10,893,600, as against £10,543,400. in 1897, an increase of £350,200. for 1898. The value of goods imported into Belgium from the United Kingdom amounted to £8,285,280., an increase of £123,640. over the returns for 1897, when the figures for imports from Great Britain and Ireland stood at £8,161,640. Germany contributed to the extent of £7,634,440., as against £7,354,240. the previous year —an augmentation of £280,200. The chief totals of interest were:— *Imports:* Chemical products, £2,926,400.; drugs and chemicals (manufactured), £1,568,560.; dyes and colours, £1,428,360. *Exports:* Raw mineral products, £2,330,880; chemical products, £1,933,440; manure, £1,516,000.; dyes and colours, £1,168,000.

MONAZITE AND MANGANESE IN BAHIA.—Some years ago *monazite* sand was found in considerable quantities by an American mining engineer near the small town of Prado, in the north of the State. This gentleman promptly purchased the lands producing the very valuable mineral, but only after a long and costly discussion with the State Government was he granted the exclusive privilege of exporting the sand in question, and it is not more than four months ago since the first cargo was shipped. The sand is estimated at £20. per ton, and the State export duty is 24 per cent. on this valuation. *Manganese* has been discovered in abundance in the vicinity of San Antonio de Jesus, a small village within easy distance of the city, and two mines are at present being worked. The ore is not of the richest, averaging about 43 per cent., but as the mining operations are not costly, and the mines are expected to yield large quantities, both these properties are considered to be very valuable.

ADUROL.—This is the monochloride substitute of hydroquinone and has very considerable advantages as against hydroquinone for development of latent photographic images. It is a white crystalline powder, easily soluble in water, and has, undoubtedly, better keeping qualities than any known developer. The solutions keep for an extraordinarily long time, even in open bottles, and the used developer solution can be utilised again and again until entirely exhausted. It works very much more rapidly than hydroquinone and is, even in winter, hardly influenced at all by the temperature. It gives much stronger density than hydroquinone, without any tendency to hardness, and is therefore very advantageous for snap-shot and studio work. It is excellent for bromide paper, and does not require any clearing bath. It does not stain the fingers or attack the skin. The sole agents for Great Britain and Colonies, for this new developer, are Messrs. Fuerst Bros., 17, Philpot-lane, London, E.C. The price is 2s. 6d per ounce.

Petroleum for Laying Dust.—Experiments in the use of oil for the laying of dust have been made on the line of the Baltimore and Potomac Railroad between Baltimore and Washington, the oil employed being of a very high fire test and of low gravity. It is said that these experiments have been most satisfactory, and have been proved excellent for the purpose, especially where the tracks are ballasted with gravel. The non-existence of dust reduces the wear and tear on the rolling stock, preserves the upholstery of the carriages, besides making travel much more comfortable and enjoyable. The oil is said to sink into the ballast on the first application to the depth of 4in.; destroys vegetation in it, and remains effective in every way for about a year. A second or third application penetrates below the cross-ties and subsequent treatment is unnecessary unless a fresh ballasting is used. A specially constructed car for sprinkling purposes is made use of, and is connected by a rubber hose with an ordinary tank car in which the oil is carried. The cost of oil per mile of single track is from £6. to £9., depending on point of delivery, and the quantity used is about 2,000 gallons. This is for the first application, and £1. to £1. 10s. annually will be a sufficient expenditure for oil in subsequent treatment. About 1,000 miles of track in the United States have been treated in this way.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are easier still, and are now quoted 6½d. for 90's, and 7d. for 50/90's, but there is more movement in the former for enrichment purposes. Carbolic acids are firm, with a strong market for crude (60%) at 2s. 1d. Crystals steady at 7¼d. There is no change in naphthas. Creosote maintains its position well. Pitch is dearer at 28s. f.o.b. East Coast, and 24s 6d. to 25s. West, owing to the effect of the hot weather on shipments.

Sulphate of ammonia has emulated the mouse on the clock in the nursery rhyme, and "run down," though we have not heard the clock strike the warning hour, which, according to tradition, leads to this procedure. The forward market is quite neglected Nearest prompt prices are:—Beckton, £12. 8s. 9d. to £12. 10s.; London (outside makes), £12. 7s. 6d.; Hull, £12 6s. 3d.; and Leith, £12. 7s. 6d.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade a fairly good inquiry prevails for all products. Bleaching powder continues active but without improvement in value though prices remain firm at £4. 15s to £5., hardwoods, f.o.b. Liverpool, and £4. 2s. 6d, softwoods, f.o.r. makers' works. Caustic soda somewhat quiet, but prices are unaltered, viz., f.o.b. Liverpool, 77%, £7. 12s. 6d.; 74%, £7. 7s. 6d.; 70%, £7.; 60%, £6. per ton. Alkali, 58%, is firm in price and in good request at £3. 17s. 6d. to £4. per ton, bags, makers' works. Soda crystals, bags, 50s. per ton. Salt-cake easier at 27s. 6d. per ton, bulk, f.o r. Sulphur unchanged at £4. 12s. 6d. per ton. Sulphate of copper rather irregular with resellers at £25 10s per ton, f.o.b. Brown acetate of lime remains steady at £4. 17s. 6d. per ton. c.i.f.; grey, £7. 15s. per ton. Acetate of soda £12. 15s. per ton. Foreign white sugar of lead is again lower at £22. 10s. to £23 per ton ex ship. White powdered arsenic in good demand at £19. to £19. 5s per ton, Garston, London, etc. Yellow prussiate of potash firm at 8d. per lb.; soda, 6¼d. per lb.; cyanide strong at 1s. 0½d. per lb. Sulphocyanides rather dearer. Ammonia salts all round are firm. In aniline oil and salt there are no changes. Carbolic acids are firmer. Potash, caustic and carbonate, are both rather dearer and stocks are low. Bichromates unaltered. Oxalic acid still offers at 3d. per lb. in quantity. Tartaric acid easier at 11¾d. per lb. Glycerine is steady and has a higher tendency. Nitrate of soda 8s per cwt. For miscellaneous chemicals the demand is only moderate, and there are no important changes in values.

REPORT ON MANURE MATERIAL.

There is not much fresh in the situation, but prices for all descriptions of material are very firm and rather tend to harden. Quotations for mineral phosphates remain as last reported, and sellers are very firm at their prices. Shippers of South American bones have advanced their ideas, and at present something over £5. per ton, ordinary terms, would have to be paid. Shippers of East Indian bone meal are also very firm, their quotation being about £5. 5s. per ton, delivered Liverpool, but buyers do not respond. On spot, supplies are scarce, and £5. 3s 9d. per ton is lowest, ex store. Nitrate of soda is still quiet at 7s. 10½d. to 8s. per cwt., according to quality. There is more inquiry for dried blood and other miscellaneous nitrogenous material, but *supplies* everywhere are scarce.

THE METAL MARKETS

LONDON, Wednesday.—Pig iron firm: Scotch Warrants closed at 65s. 10d., Middlesbrough, 61s. 8d., cash, and hematite, 69s. to½d. Copper steady: Chili bars, G.O B.'s and G.M.B. s, closed at £76. to £76. 5s. cash; and £76. to £76. 5s. three months. Tin steady: Straits closed at £117. to £117. 10s. cash, and £117 15s. to £118 5s. three months. Australian, £117. 10s.; English ingots, £120. Lead firm: Spanish, £14. 5s.; English, £14 7s. 6d. Silesian spelter, ordinary, £27. Nickel, 1s. 2½d. Antimony, £39. 10s. Quicksilver: first hands, £8. 5s.; second hands, £8. 4s. *Copper Shares* steady: Cape, 4 1/16 to 4 3/16; Copiapo, 3¾ to 4; Libiola, 1⅞ to 2⅛.; Mason and Barry, 3¾ to 4; Rio Tinto, 46 1/16 to 46 5/16; Tharsis, 8 to 8¾.

LIVERPOOL OIL AND COLOUR MARKET.

Wednesday.

OILS.—Palm oil is very dull, and no transactions are reported. Olive is well held, with Candia £31. to £31. 10s., and Spanish, £31. 10s. to £32. per tun. Linseed oil is scarce and firm at 21s. 6d. to 22s. 6d. cwt. for Liverpool makes in export casks. Cottonseed dull, with practically nothing doing in Liverpool refined at 17s. to 17s. 6d. cwt. Castor oil steady, but only a small business doing in good seconds Calcutta at 2¾d. to 2 7/8d., and first pressure French, 2 15/16d. to 2¼d. per lb. Tallow is quieter, but so far prices are well maintained. There is no change in resin, and the inquiry is fairly good. Spirits of turpentine are firmly held for 35s. 6d. cwt., with a moderate demand. Petroleum steady, with American 6¼d. to 7½d., and Russian refined, 5 5/8d. to 6d. per gallon.

CAKES.—Business in all departments continues on a limited scale, but former rates are still quoted all round. American Western linseed on the spot have a steady market, with sellers asking £6. to £6. 7s. 6d., though there is only a very moderate inquiry. Bombays are tending rather in buyers' favour at £6. 15s. to £7. per ton; whilst both River Plate and Russian remain quite nominal owing to absence of supplies. Liverpool makes are unaltered at £7. to £8. per ton, consumers purchasing only for immediate requirements. Good to choice brands of American decorticated cottonseed are slow of sale at £5. 12s. 6d. to £6. 2s. 6d., whilst Liverpool makes drag at £6. 2s. 6d. to £6. 15s. per ton. Undecorticated Liverpool makes are in moderate consumptive request, and the quotation is still given at £4. 17s. 6d. to £5 7s. 6d. Egyptian rule steady, but quiet, at £4. 10s. per ton.

COLOURS.—Prices are steady, and practically without change. Ochres: Oxfordshire—common £10., medium £12., best £15; Derbyshire—common 40s., medium 50s., best 60s.; Welsh—best 90s., seconds 50s, and common 18s.; Devonshire, 40s. to 45s.; French, J C, 65s. Umber: 40s. to 45s. White lead: £16. Red lead unchanged. Venetian red: £6. to £10. Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7. medium, £10.; finest, £20.; Zinc oxide: £22. 10s. to £25.

HULL PAINT, OIL, AND COLOUR REPORT.

Tuesday.

OILS.—The market for linseed oil continues a very strong one, showing fully an advance of £1. per ton upon the week, and equally advanced in all forward rates. The import of seed for the week having been only 1,000 qrs., yet the total imports have reached 227,131 qrs. for the year against 140,250 qrs. last year; whilst the exports of oil for the week have been 43 tons: 6 tons to Denmark, 2 Holland, 29 India, 6 Norway. Refined cotton oil is very little changed, the imports of seed for the year have been 85,076 tons against the same time a year ago of 105,789 tons, whilst the exports of oil for the week have been 101 tons: 20 tons Denmark, 7 France, 31 Germany, 34 Holland, 2 Norway, 7 Sweden. Linseed oil is quoted very firm at 20s. 3d. per cwt. naked spot; 20s. month; 19s. 3d. July-August; 17s. 6d. September-December; boiled and refined being £1. to £1. 10s. per ton extra. Refined cotton oil is quoted steady at 15s. 4½d. naked spot; 15s. 7½d. to August; crude is quoted spot 14s.; barrels, £1. 10s., and ordinary casks, £1. per ton extra. Resins are quoted from 4s. 4½d. for B/C grades to 8s. 3d. for W/W, free rails Hull, subject to 2½ discount for cash and 20% allowance for tare. Olive oil unchanged. Olive oil soap from £15. 10s. to £17. 10s. ex wharf Hull. Castor oil, extracted here: cold drawn, 29s. 6d. per cwt. in barrels, in cases 3½d. per lb; first pressure, 27s. 6d. per cwt. in barrels; in cases 3½d. per lb.; second pressure, 25s. 9d. per cwt. Arachide nut oil, 26s. per cwt. Turpentine, 35s. per cwt. Oleines, £18. 10s. to £21. per ton. Cod oil, £16. to £18. Colza oil unchanged. Danish and Swedish butters, 92s per cwt.; Dutch, 80s. to 86s.; Finnish, 84s. to 88s.; Canadian, 76s. to 86s. per cwt. American pail lard 28s. to 29s.

CAKES.—Linseed cakes easier, being quoted: 95% pure, £6. 15s. to £6. 17s. 6d. Oilcakes (linseed), £5. 15s. to £5. 17s. 6d.; Russian, £6. 10s. to £6. 12s. 6d. Cotton cakes, unchanged: best makes,

£5. 2s. 6d. to £5. 7s. 6d.; seconds, £4. 17s. 6d. to £5. 2s. 6d.; decorticated, £6. 5s.; meal, £6. Rape cakes, £4 to £4. 2s. 6d.

PAINTS.—Unchanged. Dry mineral colours, £4. to £7. according to requirements. Ordinary colours in oil from £10. per ton. Black varnish, £5. 15s. Disinfecting fluid, 10d. per gallon. Paint remover, 30s. per cwt. Oak varnish, 5s. 6d. per gallon. Carbolic powder 20%, £4. per ton.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

One notable feature in the Scotch market for chemicals this week is a drop of a farthing per lb. in bichromate of potash and bichromate of soda, dye chemicals of which nearly the whole of the British production emanates from the immediate vicinity of Glasgow. Although the home manufacture is confined to two or three works only, acting in strict combination, makers are increasing on the continent, and edging more and more into the British market, hence the further drop. General chemicals continue fairly steady at prices unchanged. Sulphate of ammonia has been holding on to the fall, but very reluctantly so, and to-day makers name £12. 10s., f.o.b. Leith as their lowest for prompt, although the article is probably procurable at a fraction less. Mineral oils and paraffins all as before. The annual statement of Young's Mineral Oil Company (the premier concern of the industry) admitting a drop for the year of nearly £18,000., has excited sensation of rather a painful kind.

Chief prices current are:—Soda crystals, £2. 5s. to £2. 7s. 6d. basis nett, Tyne; soda ash, £4. 2s. 6d. to £4 15s. nett, Tyne; white alkali, £5. to £5. 10s. nett, Tyne; alum in lump, £4. 5s. to £4. 15s. nett, Glasgow; caustic soda, white, 74° £7. 7s. 6d., 70/72° £7., 60/62° £6., and cream 60/62° £6., all nett, Liverpool; bleaching powder, 35/37°, £5. 10s. to £5. 12s. 6d. nett, Tyne; saltcake, 26/6; borax, English refined, £16., and boracic acid, £26. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s., nett, Liverpool; bichromate of potash, 3¼d., less 6½% for Scotch and English deliveries (for export, 3d. nett, f.o.b. Glasgow); bichromate of soda, 2½d., less 6½% for Scotch and English deliveries (for export, 2¼d. nett, f.o.b. Glasgow); chlorate of potash, 3⅝d., less 5% Liverpool; nitrate of soda, 8s. 3d.; sulphate of ammonia, £12. 10s. prompt, f.o.b. Leith; salammoniac, first and second white, £35. and £33. nett, any port; sulphate of copper, £26. 10s., less 5% Liverpool; paraffin scale, hard, 1⅞d. to 2d. per lb., and soft 2d. per lb.; paraffin wax, 120° semi-refined, 2¼d. to 2½d. per lb; paraffin spirit (naphtha), 9d. to 9½d. per gal; paraffin oil (burning), No. 1, 6¼d.; and crystal, 6¾d., at Glasgow and other big centres, for Scotch buyers, English sales a shade lower; ditto (lubricating) 865° £4. 15s. to £5. 5s., 885° £5. 10s. to £6., and 890/895° £6. 5s. to £6. 10s. Week's imports of sugar at Greenock were 1,583 hhds., 446 barrels, and 2,508 bags beet, unrefined.

TYNE CHEMICAL REPORT.

TUESDAY.

In the chemical market there is only a moderate business doing and prices are unchanged. Bleaching powder is quoted at £5. 5s. 70% Caustic £7., and 76/77% £8. per ton. Sulphur firm at £4. 12s. 6d. per ton. Other articles unaltered.

Bleaching powder, softs, £5. 5s. per ton, nett; do., hards, £5. 10s. per ton, nett; caustic soda: 76/77% £8., and 70% £7. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do, 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75°Tw., £2. 12s. 6d. per ton, nett; do., 100°Tw., £3. per ton, nett; do., 140°Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. od. per ton, nett; blanc fixe, £6. 10s. per ton nett; chloride of barium, refined crystals, £6. 15s. od. per ton, nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt is steady at 9s. 6d. per ton, f.o.b. Tees.

COALS.—In the coal trade there is a strong demand and prices are very firm all round. Coke continues in exceptional demand, and for export the lowest price now accepted is 25s. per ton, f.o.b. Best Northumbrian steam, 12s. 6d. to 13s. per ton; second qualities, 11s. 6d. to 12s. per ton; bunker coals, 9s. to 10s. per ton; household coals, 11s. to 12s. per ton; small steam, 6s. 6d. to 7s. per ton; coke, 25s. per ton.

New Companies.

Carbocide Manufacturing Co., Ltd.—CAPITAL, £5,000. in £1. shares. This company has been formed to enter into an agreement with L. H. Grundy, and to carry on the business of importers and manufacturers of and dealers in chemical, industrial, and other preparations, cements, oils, paints, drugs, etc. The first directors are J. S. Neill (chairman), L. H. Grundy, J. O. Neill, and E. B. Neill. Registered by Hooper & Son, 69, Ludgate Hill, E.C.

Mechanical Painting and Scaling Co., Ltd.—CAPITAL, £7,500. in £1. shares. This company has been formed to adopt an agreement with J. Fell Redman, and to carry on the business of painting and scaling contractors, machinists, paint, composition, chemical and oil manufacturers, etc. The number of directors is not to be less than 2 nor more than 5; the subscribers are to appoint the first. Qualification £100; remuneration 1 guinea each board meeting attended.

Cooper's Chemical Works, Ltd.—CAPITAL £5,000. in £1. shares. This company has been formed to acquire and carry on the business of a disinfectant and general chemical manufacturer, carried on by C. R. Cooper, at the Eagle Chemical Works, Latimer-road, Notting Hill, W., as Cooper Brothers. The number of directors is not to be less than 2 nor more than 3. The first are C. R. Cooper and Mrs. A. A. Cooper. Qualification, £50.; remuneration as fixed by the company. Registered office, Eagle Chemical Works, Latimer-rd., W.

New Patent Candle Co., Ltd.—CAPITAL £60,000. in £1. shares (30,000. pref.). This company has been formed to acquire the business of the New Patent Candle Company, Ltd. (incorporated in 1861), and to carry on the business of candlemakers, seed crushers, refiners, wax chandlers, soap makers, oil, glycerine, paraffin, wax, and chemical manufacturers, etc. The subscribers to the memorandum of association are:—C. F. Tubbs, Beechfield, Plymouth, gentleman; W. Angear, Yelveston, R.S.O., Devon, soap and candle manufacturer; W. Snow, 13, Old Town-street, Plymouth, grocer; B. Rutland, 90, Old Town-street, Plymouth, jeweller; H. B. S. Woodhouse, 17, St. Lawrence-road, Plymouth, merchant; R. Clach, J.P., 43, Torrington Place, Plymouth, draper; T. H. Harvey, J.P., Cattedown, Plymouth, chemical manufacturer.

East Lancashire Soap Co., Ltd.—CAPITAL £100,000. in £1. shares. This company has been formed to enter into an agreement with W. H. Hacking and Joshua Hacking, for the acquirement of the business carried on by them at Clayton-le-Moors, near Accrington, Lancs., as "The East Lancashire Soap Co.", and to carry on the business of soap, glycerine, oil, tallow, and chemical manufacturers, etc. The subscribers to the memorandum of association are:—W. H. Hacking, The Grange, Clayton-le-Moors, Lancs., soap manufacturer; Joshua Hacking, Henfield House, Clayton-le-Moors, soap manufacturer; James Hacking, Henfield House, Clayton-le Moors, soap manufacturer; B. Hacking, Accrington, Lancs, soap manufacturer; L. Hacking, Clondakin, co. Dublin, Ireland, paper manufacturer; A. Hacking, Christ's College, Cambridge, student; E. Kirkman, Holly Bank View, Darwen, Lancs., commercial trazeller. Registered office, Enfield Soap Works, Clayton-le-Moors, Lancs.

Gazette Notices.

PARTNERSHIP DISSOLVED.

J. M. ELLIOTT, W. CRABTREE, G. M. ELLIOTT, and J. M. ELLIOTT, Junr. Manchester, gum and starch manufacturers, etc., under the style of Elliott and Crabtree, so far as regards G. M. Elliott.

IMPORTS OF CHEMICAL PRODUCTS

AT

THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.

Week ending June 3rd.

Acetic Acid—
Holland, 103 pks. A. & M. Zimmern

Alum—
Germany, 2 pks. Butler's Wf., Ld.

Ammonia—
Holland, £90 H. Lorenz
" 210 Little & Johnston

Ammonium Phosphate—
Holland, £40 Chemical Works

Antimony Ore—
Japan, 40 t. City Coml. Wf. Co., Ld.

France, 12 Major & Field

Barium—
Germany, 110 pks. Vokins & Co., Ld.

Barium Nitrate—
Holland, £75

Barium Sulphate—
Belgium, 205 pks. J. L. Lyon & Co.
Barytes—
Belgium, 38 pks. J. L. Lyon & Co.
Holland, 83 W. Harrison & Co.
" 50 F. W. Berk & Co., Ld.
" 38 P. Jantzen
Bones—
E. Indies, 63 t. T. T. Creed
Boracic Acid—
Italy, 9 pks. A. Slator & Co.
Borax—
Germany, £27 Butler's Wf., Ld.
Caoutchouc—
France, 10 c. E. Flageollet, Parent & Co.
E. Indies, 2 Montgomerie & Workman
Zanzibar, 6 Hale & Son
Straits, 562 E. Boustead & Co
Rangoon, 7 Prop. Hay's Wf.
Ceylon, 20 Prop. Bull Wf.
Peru, 94 F. Huth & Co.
Germany, 10 Stiebel Bros.
Castor Oil—
Italy, 5 cs. Potter & Clarke
" 5 brls. A. Slator & Co.
France, 40 cs. F. Boehm
" 10 John Cockerill Line
Caustic Potash—
France, 3 pks. A. C. Hitchcock
Germany, 19 South Devon Wf. Co.
Chemicals (*otherwise undescribed*)
Sweden, £10 M. D. Co.
N. Zealand, 7 Seaward Bros., Ld.
Belgium, 203 T. Palmer
Germany, 935 L. & I. D. Jt. Co.
France, 90 "
Germany, 242 A. & M. Zimmermann
" 55 Argo S. S. Co.
" 128 H. Lambert
" 44 R. W. Greeff & Co.
Belgium, 41 John Cockerill Line
" 42 Craven & Co.
Holland, 13 G. S. N. Co.
" 520 H. Harkness
Citric Acid—
Germany, 40 pks. A. & M. Zimmermann
Coal Products—
Pitch
Holland, 24 cks. Challoner's Cable & Construction Co.
N. Russia, 60 brls. Abbey, Abbey & Co.
Tar
N. Russia, 16 brls. H. Ryding
" 84 cks Linck, Moeller & Co.
Copper Acetate—
Holland, 1 pk. Phillipps & Graves
Cream of Tartar—
Italy, 5 pks. W. C. Bacon & Co.
France, 20 "
Italy, 5 B. & F. Wf. Co., Ld.
Disinfectants—
U. States, £109 Lunham & Moore
Dyestuffs—
Alizarine
Holland, 14 pks, G. S. N. Co.
Cochineal
Canaries, 9 bgs. Sperling & Williams
Extracts
France, 127 pks. Beresford & Co.
" 80 B. & F. Wf. Co. Ld.
Denmark, 1 M. D. Co.
Gambier
Straits, 336 pks. S. Barrow & Bro.
" 147 Beresford & Co.
" 168 Dundee, Perth, & London Shipping Co.
" 252 J. Greig
Indigo
E. Indies, 50 chts. L. & I. D. Jt. Co.
Manila, 24 "
E. Indies, 10 Parsons & Keith
Myrabolams
E. Indies, 89 bgs. J. Greig
" 4,000 pckts. P. & O. Co
" 990 pks. L. & I. D. Jt. Co.
" 666 Ralli Brs.
" 670 Marshall & French
" 1,000 Beresford & Co.
Naphthaline
Germany, 2 pks. T. H. Lee
Saffron
Spain, 1 pk. Major & Field
Shumac
Italy, 100 pks. A. Slator & Co.
Tanners' Bark
Belgium, 7 t. Leach & Co.
Natal, 26 Flack, Chandler & Co.
Turmeric
Cochin, 48 pks. Major & Field
E. Indies, 660 "
Valonia
A. Turkey, £95 Hicks, Nash & Co.
" 279 A. & W. Nesbitt
" 25 F. Claydon & Co.
Dyestuffs (*otherwise undes.*)—
Ceylon, 1 pk. R. G. Hall & Co.
France, 200 Netherlands S. S. Co.
Farina—
U. States, 100 pks. Wingate & Johnston
Gambogc—
Straits, 27 cs. R. & J. Henderson
" 26 pks. Marshall & French
Glucose—
Germany, 3,930 pks. 10,875 c. R. G. Hall & Co.
U. States, 500 500 L. & I. D. Jt. Co.
" 100 584 H. Johnson & Sons
" 1,300 7,800 R. G. Hall & Co.
" 1,000 1,000 E. Thompson & Co.
" 200 1,200 E. & T. Pink
" 250 250 Trier, Meyer & Co.
" 1,000 1,000 G. Clarke & Son
" 50 294 A. B. Curtis & Co.
" 1,000 1,000 C. Mangold & Co.
" 500 500 Pickford & Co.
" 25 145 Perkins & Homer
France, 280 200 W. E. Cole
" 200 200 C. Barnard
" 1,000 1,000 Bellamy's Wf., Ld.
Glue—
France, £59 J. Harrison
" 65 Prop. Hay's Wf.
" 240 Burnett Brs. & Sons
Austria, 20 Beck & Pollitzer
Holland, 50 T. H. Lee
" 88 G. S. N. Co.
Belgium, 40 Leach & Co.
Germany, 15 L. & I. D. Jt. Co.
" 10 Butler's Wf., Ld.
" 600 Netherlands S. S. Co.
" 68 M. D. Co.
" 150 O. Schmidt & Co.
France, 1,950 T. M. Duche & Sons
Belgium, 1,500 G. E. Banes
Austria, 1,360 Bellamy's Wf., Ld.
U. States, 35 London Parcels Del. Co.
France, 50 Hernu, Peron & Co.
Glycerine—
Germany, £230 R. W. Greeff & Co.
Guano—
Sweden, 10 t. Lucas & Spencer's Wf., Ld.
G.W. Africa, 800 t. A. Hunter & Co.
Gutta Percha—
St. Lucia, 3 t. 10 c. Royal M. S. Pkt. Co.
Straits, 11 18 Anderson, Weber & Smith
" 3 Gilman Brs. & Co.
" 5 H. W. Jewsbury & Co.
W. Indies, 15 L. & I. D. Jt. Co.
Iron Bromide—
Germany, 8 pks. A. & M. Zimmermann
Lead Acetate—
Holland, 2 pks. J. Owen
Magnesia—
U. States, £37 S. Lambert & Co.
Manganese Ore—
Germany, 16 t. Blackwell & Co.
" 7 C. Hof & Co.
Manure—
E. Indies, 180 t. Fox, Roy, & Co.
Methyl Alcohol—
France, 440 g. Lister & Biggs
Molasses—
Alexandria, 865 cks. 1,000 c. New Lea V. D. Co.
U. States, 5 30 c. Davies, Turner & Co.
" 100 578 Ohlenschlager Brs.
" 700 3,918 J. Forsey
Ochre—
France, 7 pks. J. Flack
Holland, 2 Phillipps & Graves
Spain, 104 Silicate Paint Co.
Phosphates—
U. States, 3,406 t. West & Penrose
Belgium, 230 "
" 4 Sawer, Sons, & Co.
" 200 D. de Pass & Co.
" 230 Lawes Chemical Manure Co.
" 65 J. E. Kitton
France, 180 A. Hunter & Co.
Potash—
Holland, 13 pks. J. Owen
Potassium Bicarbonate—
Holland, 18 pks. A. & M. Zimmermann
Potassium Bromide—
Germany, 3 cs. R. W. Greeff & Co.
" 50 pks. G. S. N. Co.
Potassium Carbonate—
Germany, 16 t. 8 c. J. M. Steel & Co.
" 10 R. W. Greeff & Co.
" 10 Charles & Fox
France, 2 16 J. Barber & Co.
" 10 A. C. Hitchcock
Canada, 2 19 J. Barber & Co
" 5 10 Charles & Fox
Belgium, 4 10 F. Smith
Potassium Permanganate—
Germany, 75 pks. R. W. Greeff & Co.
Pyrites—
Spain, 2,376 t. Anderson, Anderson, & Co
Red Lead—
Holland, 62 pks. J. Matton
" 62 Perkins & Homer
" 33 Burrell & Co.
" 34 D. Storer & Sons
Germany, 143 Blundell, Spence, & Co.
Rosin—
France, 10 cks. R. James & Co.
U. States 1,467 brls. T. Nickels & Co.
" 1,738 Moore & Hole
" 300 London Oil Storage Co.
Saltpetre—
U. States, 16 brls. L. & I. D. Jt. Co.
" 16 P. Hecker & Co.
Salicylic Acid—
Germany, 20 pks. Butler's Wf., Ld.
Sodium Hyposulphite—
Holland, 10 t. J. M. Steel & Co.
Germany, 2 2 c. H. Lambert
Starch—
Holland, 80 pks. G. S. N. Co,
" 844 A. Starck
" 1,065 Little & Johnston
U. States, 120 Beck & Pollitzer
" 150 R. G. Hall & Co.
" 330 C. Tennant, Sons, & Co.
" 25 F. Tallach & Son
Belgium, 67 Leach & Co.
" 58 Sawer, Sons, & Co.
" 80 Taylor Brs.
" 46 Fellows, Morton, & Co.
" 150 E. & T. Pink
" 406 T. H. Lee
Germany, 280 Seaward Brs., Ld.
France, 412 A. E. Hitchcock
" 25 L. Mendelsohn
" 895 E. & T. Pink
" 1,547 W. E. Cole
Stearine—
Holland, 17 cks. W. von Romberg
" 25 bgs. J. Barber & Co.
Belgium, 63 H. Hill & Sons
" 50 D. C. Thomas & Sons
France, 410 G. Boor & Co.
Sulphur—
Italy, 100 t. Johnson & Hooper
Tallow—
France, 131 bgs. H. Hill & Sons
" 29 cks. C. S. Lovell
Belgium, 2 John Cockerill Line
Canada, 27 R. Tucker & Co.
N'foundland, 29 "
Holland, 1 Beresford & Co.
Sydney, 64 J. R. Francis & Co.
N. Zealand, 125 Col., Con., & Dist. Co.
" 185 H. Hill & Sons
Tartar—
Italy, 44 pks. B. Jacob & Sons
Tartaric Acid—
Holland, 34 pks. Kirkpatrick, Barr, & Co.
" 10 Netherland S. B. Co.
Ultramarine—
Holland, 2 pks. J. Barber & Co.
" 12 Phillipps & Graves
Belgium, 2 W. Harrison & Co.
Germany, 53 Steinhoff, Sons, & Co.
Varnish—
U. States, 5 pks. Atlantic Transport Co.
" 7 Lon. & Til. Ltge. C. & D. Co.
Holland, 1 Hernu, Peron, & Co.
Germany, 6 Butler's Wf., Ld.
White Lead—
Holland, 20 pks A. & M. Zimmermann
" 20 Perkins & Homer
" 20 J. R. Francis & Co.
" 40 Randall Brs.
Belgium, 100 G. E. Banes
" 59 J. L. Lyon & Co.
" 56 T. & W. Farmiloe, Ld.
Germany, 2 H. Lambert
" 28 W. A. Rose & Co.
Wolfram Ore—
Sydney, 1 t. P. & O. S. N. Co.
Wood Pulp—
Germany, 23 pks. C. S. Lovell
" 600 Erith & Dartford L. Co.
U. States, 6,200 Henderson, Craig, & Co.
" 24 Beck & Pollitzer
Sweden, 250 Tough & Henderson
" 1,460 W. G. Taylor & Co., Ld.
" 808 Alsing & Co., Ld.
" 800 Johnsen & Jorgensen
Holland, 28 M. H. Voss
" 113 Thames S. T. & L. Co., Ld.
Skein, 30 Becker & Wagner
Norway, 40 Page, Son, & Co.
" 400 E. J. & W. Goldsmith
" 280 Tough & Henderson
" 80 Daily Telegraph Co.
" 4,485 Johnsen & Jorgensen
" 2,800 London Paper Mills Co.
" 400 bls. Horton, Kirby P. M. Co.
Zinc Oxide—
Holland, 180 pks. M. Ashby, Ld.
U. States, 500 "
Zinc Sulphate—
Germany, £70 F. Smith

LIVERPOOL.

Week ending June 1st.

Antimony Ore—
Valparaiso, 1 sk. Gregory, Lawson & Co.
Barytes—
Rotterdam, 22 cks. / 20 bgs.
Bones—
Acre, 450 bgs. R. A. Beaver & Co.
Alexandria, 773 / 50 t.
Cadiz, 212 bgs.
Mersyne, 1,386
Smyrna, 217 t.
Borate—
Valparaiso 2,360 bgs.
Caoutchouc—
Valparaiso, 20 bls. J. H. Schroeder & Co.
Castor Oil—
Leghorn, 10 cs.
China Clay—
Montreal, 1 ck.
Coal Products—
Aniline Salt
Rotterdam, 32 cks.
Colours—
Hamburg, 4 cks.
Rotterdam, 2
Cottonseed Oil—
Baltimore, 1,000 brls.
Pensacola, 1,000
Cream of Tartar—
Bordeaux, 48 cks.
Tarragona, 2

Dyestuffs—
Argols
Leghorn, 1 ck. Taylor, Irvine & Co.
Cutch
Colombo, 128 cs.
Rangoon, 710 bxs.
Extract
Fiume, 680 brls.
New York, 52
Rotterdam, 150 cks. 40 cs.
Fustic
Cartagena, 773 pcs. Aucazar Brs. & Co.
Philadelphia, 30 brls.
Indigo
Valparaiso, 5 srns. Chalmers, Guthrie & Co.
Myrabolams
Colombo, 7 cs.
Pitch
Boston, 16 bxs A. Gestelschaft
Shumac
Palermo, 675 bgs.
Tumeric
Calcutta, 9 bgs.
Dyewood Extract—
New York, 50 brls. McArthur & Co.
" 117 bxs.
Glucose—
Boston, 250 brls.
Glue—
Genoa 8 cks. J. Glynn & Son
Marseilles, 10 cs.
Rotterdam, 140 bgs. 4 cs.
St. Nazaire, 20 cks. 20 bgs.
Glue Stock—
Marseilles, 267 cs.
Iodine—
Valparaiso, 31 kgs. A. Gibb & Sons
Litharge—
Hamburg, 3 cks.
Lithopone—
Rotterdam, 60 cs.
Manganese Ore—
Hamburg, 250 bgs.
Poti, 3,340 t.
Paint—
Boston, 10 cs. Farr & Monson, Ld.
Havre, 25 dms.
Painters' Colours—
Rotterdam, 4 cks.
Paraffin Wax—
Baltimore, 200 brls.
New York, 250 Thompson & Bedford
Philadelphia, 440 Anglo-American
200 cs. Oil Co.
Rangoon, 90 bgs. 160 bxs.
Phosphates—
Br'nsw'k, Ga., 1,525 t.
Pyrites—
Huelva, 4,103 t. Matheson & Co
Rosin—
Bayonne, 2,526 brls.
Charleston, 1,305
New York, 300
Salt—
Montreal, 19 brls.
Saltpetre—
Calcutta, 594 bgs.
Hamburg, 104 kgs.
Karachi, 264 bgs.
Soap—
Bordeaux, 100 bgs. Geo. G. Blackwell, Sons & Co., Ld.
Leghorn, 25 bxs.
Marseilles, 30 31 cs.
New York, 3,000 bxs. Lever Brs., Ld.
Philadelphia, 2,000 "
Starch—
Antwerp, 20 cs. J. T. Fletcher & Co.
" 485
Hamburg, 7 brls.
Stearine—
Antwerp, 5 bgs.
Sulphur—
Catania, 1,725 bgs.
Tallow—
Baltimore, 300 tcs. 100 brls.
Boston, 435 tcs. Cuthbert & Hall
" 1,000
Campana, 66⅔ pps.
New York, 100 tcs.
Pensacola, 120
Zarate, 114 pps. 73 brls.
Tartar—
Naples, 5 cks.
Tartaric Acid—
Messina, 8 cks.
Turpentine—
Br'n'wick, Ga. 1,750 brls.
Ultramarine—
Rotterdam, 39 cks. 16 cs.
Varnish—
New York, 20 cs. 15 brls. W. A. Warren
Waste Salt—
Hamburg, 50 bgs.
Wood Pulp—
Boston, 49 bdls. 90 rolls Lever Brs., Ld. 18 crts. 47 cs.
Rotterdam, 153 bls.
Zinc Ashes—
Genoa, 23 brls.
Zinc Oxide—
Antwerp, 30 brls.
Rotterdam, 40

MANCHESTER.

Week ending June 3rd.

Acetate of Lime—
New York, 459 bgs.
Antimony Salt—
Hamburg, 1 ck.
Rotterdam, 4
Barium Chloride—
Rotterdam, 8 cks.
Barytes—
Antwerp, 205 bgs.
Rotterdam, 100
Calcium Carbide—
Gothenburg, 10 dms.
Chemicals *(otherwise undescribed)*
Rotterdam, 3 cks.
Chromium Acetate—
Rotterdam, 10 cks.
Citric Acid—
Rouen, 20 cs.
Coal Products—
Alizarine
Rotterdam, 26 cks.
Aniline Salt
Rotterdam, 4 cks.
Tar Oil
Antwerp, 9 pks.
Colours—
Antwerp, 11 cks.
Rotterdam, 217 29 cs. 11 bxs.
Dyestuffs—
Extract
Rotterdam, 10 cks.
Rouen, 10 17 cs.
Dyewood Extract—
New York, 30 bxs.
Farina—
Hamburg, 225 bgs.
Stettin, 500 N. W. Jackson
" 230 W. H. Stott & Co.
Glucose—
New York, 1,000 brls.
Glue—
Antwerp, 5 cks. 24 bls.
Rotterdam, 60 bgs.
Rouen, 20 41 cs. 20 36 cks.
Glue Stock—
Hamburg, 36 bls.
Lead Acetate—
Hamburg, 11 cks.
Rotterdam, 19
Rouen, 95
Manganese Borate—
Hamburg, 1 ck
Paint—
New York, 8 kgs.
Paraffin Wax—
New York, 920 brls.
Potash—
Hamburg, 11 cks.
Rotterdam, 30
Potassium Prussiate—
Antwerp, 6 brls.
Rouen, 4 cks.
Soap—
New York, 1,280 bxs.
Sodium Aluminate—
Hamburg, 9 cks.
Starch—
Hamburg, 368 cs.
New York, 125 bgs.
Rotterdam, 10
Tannic Acid—
Hamburg, 10 cs. 10 cks.
Tartar—
Hamburg, 16 cks.
Tartaric Acid—
Rotterdam, 20 cks.
Ultramarine—
Hamburg, 6 cks. 1 cs.
Varnish—
Hamburg, 2 cks.
Waste Salt—
Hamburg, qty.
Wood Pulp—
Christiania, 2,885 bls. W. H. Ingram
" 45 "
Drammen, 480 "
Gothenburg, 2,394 500 pks.
Hamburg, 420
Rotterdam,
Zinc Oxide—
Rotterdam, 40 brls.

HULL.

Week ending June 3rd.

Acetic Acid—
Ghent, 20 pks. Wilson, Sons, & Co., Ld.
Barytes—
Antwerp, 68 cks. Bailey & Leetham, Ld.
" 72
Bremen, 45
Rotterdam, 47 Hull & Netherlands S. S. Co.
Castor Oil—
Antwerp, 28 cks.
Chemicals *(otherwise undescribed)*
Antwerp, 2 cks. Wilson, Sons, & Co., Ld.
Coal Products—
Alizarine
Rotterdam, 59 pks. Hull & Netherlands S. S. Co.
Aniline
Rotterdam, 9 cks. Hull & Netherlands S. S. Co.
29 pks.
Naphthol
Rotterdam, 10 cks. Hull & Netherlands S. S. Co.
Pitch
Konigsberg, 25 cks.
Tar
Konigsberg, 345 brls. Bailey & Leetham, Ld.
Colours—
Amsterdam, 2 cks. Hull & Netherlands S. S. Co.
Antwerp, 8 brls. Wilson,
7 pks. Sons, & Co., Ld.
Bremen, 1 J. Pyefinch & Co.
Hamburg, 10 cks.
Rotterdam, 3 7 cs. Hull & Netherlands S. S. Co.
18 pks.
Rouen, 154 cks. Wilson, Sons, & Co., Ld.
Stettin, 34 "
Cottonseed Oil—
New York, 105 brls. Wilson, Sons, & Co., Ld.
Dyestuffs—
Extracts
Rouen, 15 cks. Wilson, Sons, & Co., Ld.
Farina—
Harlingen, 50 bls. Hull & Netherlands S. S. Co.
100 bgs.
Glucose—
New York, 50 brls. Wilson, Sons, & Co., Ld
" 1,170
Rotterdam, 40 bgs. Hull & Netherlands S. S. Co.
Stettin, 100 Wilson, Sons, & Co., Ld.
Glue—
Christiansund, 2 brls. Wilson, Sons, & Co., Ld.
Dunkirk, 10 cks. "
Hamburg 5 bgs. "
" 90
Rotterdam, 1 cs. Hull & Netherlands S. S. Co.
10 bgs.
Rouen, 25 Wilson, Sons, & Co., Ld.
Glue Stock—
Antwerp, 59 bgs. Wilson, Sons, & Co., Ld.
Lead Acetate—
Hamburg, 12 cks. Wilson, Sons, & Co., Ld.
Rouen, 4 "
Stettin, 14 "
Lithopone—
Hamburg, 20 cks. Wilson, Sons, & Co., Ld.
Rotterdam, 40 Hull & Netherlands S. S. Co.
Ochre—
New York, 218 brls.
Paint—
Amsterdam, 9 cs. Hull & Netherlands S. S. Co.
101 dms.
Paraffin Wax—
New York, 280 brls.
Phosphates—
Dunkirk, 2,585 bgs. Wilson,
100 t. Sons, & Co., Ld.
Potash—
Antwerp, 2 dms. Wilson, Sons, & Co., Ld.
Dunkirk, 16 cks. "
Hamburg, 2
Red Lead—
Amsterdam, 8 cks. Hull & Netherlands S. S. Co.
Rotterdam, 33 "
Saltpetre—
Antwerp, 135 bgs. Wilson Sons, & Co., Ld.
Hamburg, 22 brls.
Soap—
New York, 1 brl. Wilson,
50 bks. Sons, & Co., Ld.
" 300 bxs.
Soda—
*Ghent, 100 bgs. Wilson, Sons, & Co., Ld.
Sodium Nitrate—
Hamburg, 1,567 bgs.
Starch—
Amsterdam, 30 bgs. Hull & Netherlands S. S. Co.
Antwerp, 132 cs. Wilson, Sons, & Co., Ld.
" 120
Bremen, 1,930 Veltmann & Co.
Ghent, 73 Wilson, Sons, & Co., Ld.
Tallow—
Dunkirk, 87 cks. Wilson, Sons, & Co., Ld.
New York, 255 60 tcs. "
" 24 hds.
Tartaric Acid—
Rotterdam, 6 cks: Hull & Netherlands S. S. Co.
Turpentine—
Libau, 110 brls.
" 12 Wilson, Sons, & Co., Ld.
Ultramarine—
Bremen, 12 cks.
Varnish—
Antwerp, 2 crts. J. G. Glew
" 1 brl. Wilson, Sons, & Co., Ld.
Hamburg, 2 dms. "
Vitriol—
Hamburg, 117 cks.
Waste Salt—
Hamburg, 76 t.
2,372 bgs.
White Lead
Amsterdam, 11 cks. Hull & Netherlands S. S. Co.
Ghent, 13 cs.
Rotterdam, 20 cks. "
Wood Pulp—
Abo, 98 bls. J. Good & Sons
Christiania, 760 pks. Wilson,
47 cs. Sons, & Co., Ld.
Drontheim, 1,200 bls. "
Gothenburg, 287 bdls. 334 pks. "
Hamburg, 80 "
New York, 264 rolls "
Stockholm, 45 bls.

Zinc Oxide—
Antwerp, 4 brls. Bailey & Leetham, Ld.

Zinc White—
Amsterdam, 5 cks. Hull & Netherlands S. S. Co.
Bremen, 40

GLASGOW.

Week ending June 8th.

Alumina Sulphate—
Rotterdam, 2 cks. J. Rankine & Son

Barytes—
Rotterdam, 80 pks. J. Rankine & Son

Chemicals *(otherwise undescribed)*
Amsterdam, 1 cs. J. Rankine & Son
Montreal, 50 brls.
Rotterdam, 1 bx. ,,

Coal Products—
Alizarine
Rotterdam, 12 cs. J. Rankine & Son
Aniline
Amsterdam, 1 ck. J. Rankine & Son
Rotterdam, 14 9 cs. ,,
Pitch
Bordeaux, 1 ck.

Colours—
Hamburg, 1 ck. J. Currie & Co.
,, 5 pks. J. Rankine & Son
Rotterdam, 207 18 cks. 9 cs. ,,

Cream of Tartar—
Barcelona, 10 cks.
Bordeaux, 7
Tarragona, 17

Dyestuffs—
Extract
Baltimore, 5 brls.

Glucose—
Baltimore, 200 brls.
Montreal, 50
New York, 150
Philadelphia, 100

Glue—
Hamburg, 200 bgs. J. Rankine & Son
Rotterdam, 20 ,,

Gutta Percha—
Hamburg, 54 pks. J. Currie & Co.

Oxalic Acid—
Rotterdam, 6 cks. J. Rankine & Son

Phosphates—
Charlotte Harbour, 2,245 t. A. Cross & Sons

Potash—
Hamburg, 22 cks. J. Rankine & Son
Rotterdam, 75 kgs. ,,

Potassium Cyanide—
New York, 4 cs.

Potassium Nitrate—
Hamburg, 50 cks. J. Currie & Co.

Rosin—
Bordeaux, 43 cks.
Rotterdam, 3 J. Rankine & Son

Salt—
Hamburg, 1,250 bgs. J. Currie & Co.

Soap—
Rotterdam, 90 cs. J. Rankine & Son

Soap Stock—
New York, 135 brls.

Sodium Nitrate—
Rotterdam, 22 cks. J. Rankine & Son

Starch—
Amsterdam, 40 bxs.
Boston 300 bgs.
New York, 1,000 bxs.
Rotterdam, 13 cs. J. Rankine & Son

Stearine—
Amsterdam, 92 bgs. J. Rankine & Son
Rotterdam, 75 brls. ,,

White Lead—
Rotterdam, 51 cks. 28 pks. J. Rankine & Son

Wood Pulp—
Christiania, 1,005 bls. 52 cs. J. T. Salvesen & Co.
Montreal, 86 bls.

Zinc Oxide—
New York, 130 brls.

Zinc White—
Rotterdam, 25 cks. J. Rankine & Son

TYNE.

Week ending June 3rd.

Barytes—
Antwerp, 300 bgs. Tyne S. S. Co.
Hamburg, 20 cks. ,,
Rotterdam, 60 200 bgs. ,,

Chemicals *(otherwise undescribed)*
Amsterdam, 1 cs. W. Swanston & Sons
Hamburg, 10 cks. Tyne S. S. Co.

Colours—
Hamburg, 1 cs. Tyne
2 cks. S. S. Co.
Rotterdam, 1 ,,

Salammoniac—
Rotterdam, 2 cks. Tyne S. S. Co.

Salt—
Hamburg, 200 t. Blaydon M. Co.

Soap—
Rotterdam, 2 cs. Tyne S. S. Co.

Starch—
Antwerp, 120 cs. Tyne S. S. Co.
Rotterdam, 235 ,,

Stearine—
Antwerp, 13 bgs. Tyne S. S. Co.

Varnish—
Antwerp, 1 cs. Tyne S. S. Co.

Wood Pulp—
Gothenburg, 71 pks.

Zinc Oxide—
Antwerp, 5 brls. Tyne S. S. Co.

GOOLE.

Week ending May 31st.

Caoutchouc—
Boulogne, 2 cks.

Chemicals *(otherwise undescribed)*
Hamburg, 1 cs.

Colours—
Amsterdam, 1 ck.
Antwerp, 1
Boulogne, 2 cs. 258 pks.
Dunkirk, 2 bgs.
Ghent, 1
Hamburg, 56 cks. 36
Rotterdam, 113 3

Dyestuffs—
Extracts
Antwerp, 10 brls.

Farina—
Hamburg, 3,200 bgs.
Rotterdam, 70

Glue—
Antwerp, 25 bs.
Boulogne, 8
Hamburg, 20 bgs.
Rotterdam, 4

Ochre—
Calais, 10 cks.

Phosphates—
Ghent, 808 bgs.

Potash—
Calais, 40 dm
Hamburg, 10 cks.

Potassium Carbonate—
Hamburg, 4 cks.

Potassium Sulphate—
Dunkirk, 2 cks. 12 dm

Pyrites—
Seville, 110 t.

Saltpetre—
Hamburg, 8 brls.

Silicate—
Rotterdam, 4 cks.

Starch—
Ghent, 146 bxs.

Zinc Ashes—
Rotterdam, 1 ck.

GRIMSBY.

Week ending June 3rd.

Acetic Acid—
Hamburg, 2 crbys.

Barytes—
Rotterdam, 80 bgs.

Caoutchouc—
Antwerp, 1 cs.
Hamburg, 18
Rotterdam, 2 1 bl.

Chemicals *(otherwise undescri*
Hamburg, 1 cs.

Coal Products—
Pitch
Hamburg, 40 cks.

Colours—
Antwerp, 23 cks. 62 pks.
Hamburg, 9 3 cs. 253
Rotterdam, 100 bgs. 3 cks. 35

Dyestuffs—
Indigo
Hamburg, 3 cs.

Limestone—
Antwerp, 4 cts.

Salt—
Hamburg, 1,300 bgs.

Starch—
Antwerp, 68 cs.

Wood Pulp—
Gothenburg, 299 bs.

EXPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending June 7th.

Alkali—
New York, 7 t. 18 c. £128

Ammonia—
B. Ayres, 20 cs. £18
Durban, 15 30
Sydney, 4 12

Amm nia (Anhydrous)—
Cape Town, 20 cyldrs. £125
Cologne, 31 70

Ammonium Carbonate—
Amsterdam, 1 t. 8 c. £14
Antwerp, 8 6 230
B. Ayres, 1 19 62
Brisbane, 10 19
Montreal, 2 16 70

Ammonium Muriate—
Hiogo, 10 cks. £48

Ammonium Sulphate—
Antigua, 15 t. 7 c. £179
Barbadoes 50 640
Guadeloupe, 44 528
Hamburg. 50 650
Newport News, 16 1 175
St. Vincent, 25 300
Valencia, 27 6 350

Arsenic—
Auckland, 20 pks. £20
Cape Town, 20 dms. 20

Borax—
Auckland, 1 t. £40
Dunedin, 1 17
Rotterdam, 50 cks. 75

Carbonic Acid Gas—
Channel Is., 90 tubes £34
Santos, 8 cs. 33

Caustic Potash—
Sydney, 10 c. £18

Caustic Soda—
Melbourne, 4 t 11 c. £86
Wanganui, 5 7 45

Chemicals *(otherwise undescribed)*
Amsterdam, 18 kgs. £114
Brisbane, 2 cs. 7
Brussels, 20 3 199
Calcutta, 125 9 pks. 189
Cologne, 10 59
Delagoa Bay, 5 10
Dominica, 6 crbys. 10
Durban, 3 11
E. London, 2 11
Hamburg, 83 kgs. 567
Marseilles, 4 cks. 1 111
Melbourne, 82 97
Pt. Elizabeth, 1 10
Rotterdam, 10 kgs. 65
Tobago, 4 15

Chloride of Lime—
Auckland, 6 c. £7
Lyttelton, 10 11
Wellington, 10 11

Citric Acid—
Brisbane, 5 c. £34
Brussels, 10 60
Canterbury, 4 29
Durban, 3 22
Dunedin, 1 7
Helsingfors, 1 7
Lisbon, 10 73
Lyttelton, 1 7
St. Petersburg, 40 kgs. £292

Coal Products—
Aniline Oil
Rotterdam, 12 dms. £400
Aniline Dyes
Auckland, 2 cs. £49
Sydney, 1 6
Benzol
Rotterdam, 50 cks. £150
Carbolic Acid
Colombo, 8 dms. £5
Cossack, 5 6
Hamburg, 5 tins 10
Launceston, 2 cs, £7
New York, 23 cks. 52
Coal Tar Dyes
Boston, 3 brls. £68
Creosote
Ostend, 158,990 galls. £1,407
Naphtha
B. Ayres, 45 dms. £900
Naphthaline
E. London, 8 pks. £14
New York, 209 cks. 232
Stettin, 10 46
Pitch
Amsterdam, 655 t. £715
Antwerp, 130 143
Christiania, 40 fkns. 13
Dunkirk, 170 200
Melbourne, 10 brls. 8
Pyridine
Antwerp, 12 cks. £125
Mainz, 15 dms. 289
Stettin, 24 250
Tar
Canterbury, 25 dms. £5
Durban, 100
Malmo, 2 cks.
Melbourne, 10 1nlts. 50
Pt. Elizabeth, 550
Trinidad, 10 10 brls.

Copper Sulphate—
Durban, 5 c.
Treport, 5 t. 10

Cream of Tartar—
Delagoa Bay, 2 c.
Durban, 3
Pt. Elizabeth, 3

Disinfectants—
Barbadoes, 6 cks.
Brisbane, 50
Cape Town, 2
Colombo, 44
Napier, 20
Otago, 29 cs.
Rangoon, 5
Rouen, 4
Shanghai, 62
Tientsin, 25 kgs.
Wellington, 28

Glycerine—
Otago, 1 t.

Guano—
San Francisco, 18 c.

Manure—
Antigua, 11 t.
Barbadoes, 155 1 c.
Colombo, 1 4
Durban, 54
Melbourne, 133 4
Morlado, 199
Riga, 101 5

San Francisco, 8 19 70
St. Lucia, 30 6 330

Pearl Ash—
Mauritius, 100 t. £359

Phosphoric Acid—
Mauritius, 65 t. £1,037
Newport News, 23 cs. 92

Phosphorus—
Wellington, 4 c. £35

Potassium Bichromate—
Piræus, 2 t. 1 c. £70

Potassium Chlorate—
Dunedin, 11 c. £16
Havre, 5 1 45
Piræus, 1 34

Potassium Cyanide—
Auckland, 13 t. 10 c. £1,442
Melbourne, 5 525
New York, 40 cs. 410
Pt. Elizabeth, 12 3 1,297

Potassium Prussiate—
Danzig, 32 cks. £357

Potassium Sulphate—
Mauritius, 50 t. £467

Salammoniac—
Bushire, 11 c £16

Saltpetre—
Bahia, 4 t. 8 c. £96
Brisbane, 2 42
Santos, 6 9 143
Sydney, 10 11

Sheep Dip—
B. Ayres, { 2 t. 9 c. / 3,000 cs. £5,350
Cape Town, 250 313
Delagoa Bay, 250 dms. 66
E. London, 500 625
Hobart, 125 219
Launceston, 150 263
Melbourne, 20 cks. 80
Pt. Elizabeth, 15 c. 35
Stettin, 60 cs. 105
Sydney, 8 t. 2 c. 210
Timaru, 250 cs. 438

Soda —
Cape Town, 1 t. 16 c. £6
Durban, 2 11

Sodium Bicarbonate—
Banbury, 1 t. £6
Barbadoes, 1 4 c. 6
Brisbane 10 15

Sodium Carbonate—
Durban, 5 c. £5

Sodium Prussiate—
Danzig, 9 cks. £231

Sulphur—
Cape Town, { 8 t. 19 c. / 175 cks. 80 kgs. £277
Newport News, 2 t. 3 c. 69
Trinidad, 1 8

Sulphuric Acid—
Colombo, 20 cs £19
Trincomalee, 30 60

Superphosphates—
Auckland, 30 t. £98

Tartaric Acid—
B. Ayres, 1 t. £108
Canterbury, 5 c. 27
Delagoa Bay, 2 13
Durban, 3 17
Limon, 3 13
Pt. Elizabeth, 2 13

Washing Powder—
Lyttelton, 5 t. 5 c. £100

LIVERPOOL.

Week ending June 7th.

Acetic Acid—
Lisbon, 1 t. 3 c. £8
Sydney, 5 6

Alumina Sulphate—
London, Ont., 12 t. 14 c. 3 q. £50

Ammonia—
Ceara, 9 c. 3 q. £18

Ammonium Carbonate—
Genoa, 2 t. 2 c. £60
Gijon, 10 15
Melbourne, 1 26
Valparaiso, 1 18 50
Venice, 1 26

Ammonium Sulphate—
Alicante, 20 t. £255
Antwerp, 50 10 c. 585
Barbadoes, 22 17 1 q. 279
Cullera, 50 450
Demerara, 82 8 1,039
Gd. Canary, 20 250
Las Palmas, 52 1 664
Malaga, 10 4 106
Messina, 10 1 129
Montreal, 5 3 65
Palermo, 5 4 67
Santa Cruz, 3 1 38
Valencia, 285 3 3 3,532

Arsenic—
Ceara, 10 c £12
San Francisco, 3 t. 12 2 q. 70

Basic Slag—
Bordeaux, 836 t. 14 c. £1,330
Nantes, 21 3 3 q. 35
Palermo, 34 10 53

Bleaching Powder—
Amsterdam, 42 cks.
Baltimore, 168
Barcelona, 75
Boston, 846
Calcutta, 150 cs.
Chicago, 27 64 brls.
Cincinatti, 20
Detroit, 26
Ibrail, 40
Leghorn, 25
Milwaukee, 150
Montreal, 45
Naples, 20
New York, 299 20
Perth. 13
Philadelphia, 102
Rouen, 9
San Francisco, 100
San Sebastian, 31
Santiago, 6
Venice, 15

Boracic Acid—
Brisbane, 1 t. 10 c. £37
Havana, 10 14
Montreal, 11 15
Sydney, 3 2 q. 5

Borax—
Brisbane, 4 t. 2 c. £62
Genoa, 1 1 3 q 17
Ibrail, 1 18 27
Montreal, 4 6 ½ 74
Perth, W.A., 1 14
Shanghai, 1 9 3 26
Sydney, 2 32
Tal Tal, 12 31
Tampico. 1 16
Vera Cruz, 2 28

Calcium Chloride—
Adelaide, 3 t. 1 c. £7
Brisbane, 10 5 23
Gothenburg, 3 13 9
Melbourne, 5 2 11
New York, 5 5 12
Odessa, 20 9 43

Castor Oil—
Georgetown, 45 cs
Guslhede, 6 brls
Kirgston, 10 cs

Caustic Potash—
Cairo. 11 c. £16
Sydney, 1 t. 1 30

Caustic Soda—
Adelaide, 9 bxs.
Alexandria, 68 dms.
Algoa Bay, 25 cs.
Alicante, 57
Ancona, 73
Antwerp, 114
Barcelona, 385 60 cks.
Bari, 53
Batavia, 10
Bilbao, 27 brls.
Boston, 100 63
Brantford, 40
B Ayres, 240
Calcutta, 65
Callao, 200
Cambrai, 55
Catania, 15
Corunna, 28
Dunedin, 7
Fremantle, 61 20 pks.
Funchall, 5
Geelong, 11
Galatz, 17
Genoa, 367
Ghent, 34
Gothenburg, 10
Hiogo. 354
Hong Kong. 65
Huelva, 80
Ibrail, 17
Kavalla, 6
Kingston, 38
Kobe, 102
Leghorn, 238
Malaga, 68
Malta, 11
Maracaibo, 10 cks.
Melbourne, 281 13
M. Video, 125
Nagasaki, 250
Naples, 17
N. Orleans, 50
New York, 50 50 brls. 25 bxs.
Odessa, 135
Oporto, 15
Palermo, 10
Penang, 10
Piræus, 30
Port Louis, 25
Puerto Cabello, 16
Punta Arenas, 17
Rio de Janeiro, 11
Rotterdam, 171
Rouen, 85
St. Stephen 50
San Francisco, 150 60 pks.
San Sebastian, 110
Santos, 45
Sao Paulo, 6
Seville, 160 25 25 kgs.
Shanghai, 35
Smyrna, 60
Sourabaya, 25
Sydney, 30
Talcahuano, 85
Trieste, 60
Valencia, 50
Valparaiso, 100
Victoria, 50
Yokohama, 100

Chemicals *(otherwise undescribed)*
Alexandria, { 1 t. 1 c. / 30 brls. £104
Bombay, 25 117
Braila, 10 c. 3 q. 3
Brisbane, 1 5
Callao, 14 1 4
Canea, 1 2 5
Cape Town, 4 kgs. 6
Galatz, 3 5 9
Genoa, 4 cks. 33
Gothenburg, 10 15
Las Palmas, 10 1 2 20
Montreal, 6 20
M. Video, 21 3 58
New York, 5 2 126
Odessa, 57 19 3 542
Penang, 20 15
Piræus, 2 19 1 14
Rio de Janeiro, 1 6
San Francisco, 30 13 1 140
Seville, 10 15
Singapore, 3 30
Sydney. 13 15 2 66
Talcahuano, 2 14 2 13

China Clay—
Bilbao, 50 bgs.
Boston, 910 cks.
Calcutta. 200
Montreal. 110 300
N'port News, 1,950
New York, 200
Odessa, 100
Philadelphia, 728
Sydney, 16
Vera Cruz, 130

Chloride of Lime—
Colombo, 10 t. £158
Pernambuco, 15 c. 1 q 5

Citric Acid—
Corunna, 1 c. £7

Coal Products—
Alizarine
Constantinople, 25 cks.
Lisbon, 1 cs.
Aniline Colours
Barcelona, 4 kgs. 20 brls.
Boston, 6 1 cs.
New York, 15 cks.
Aniline Oil
Boston, 8 dms
Genoa, 1
Aniline Salt
Barcelona, 8 cks.
Boston, 64 cs.
Genoa, 5
Montreal, 3
Naples, 2
Carbolic Acid
Barcelona, 9 c. 3 q. £31
Bombay, 2 t. 5 15
Brisbane, 14 12
Hamburg, 15 1 55
New York, 9 18 1 401
Rotterdam, 9 15 590
Vancouver, B.C., 3 2 2
Creosote
Bordeaux, 150 cks 200 brls.
Montreal, 50
Creosote Oil
Newport News, 500 brls.
New York, 100
Philadelphia, 500
Pitch
Nantes, 153 t.
Tar
Demerara, 20 brls.
Seville, 2

Copperas—
Piræus, 1 t. 2 q. £2

Copper Sulphate—
Ancona, 5 2 q. £103
Antwerp, 9 10 c. 139
B. Ayres, 19 25
Bahia, 10 14
Bari, 2 11 64
Batoum, 2 7 3 13
Bordeaux, 252 3 2 5,185
Galatz, 10 193
Genoa, 16 19 1 350
Ghent, 10 4 1 249
Leghorn, 18 1 362
Lisbon, 2 1 50
Madras, 11 1 14
Marseilles, 19 17 508
Mexico, 12 1 308
Montreal, 2 7 2 62
Nantes, 54 7 1,248
Naples, 10 4 2 219
N. Orleans, 14 18 2 376
Talcahuano, 8 18 2 229
Tal Tal, 2 56

Disinfectants—
Adelaide, 4 t. 19 c. £50
Pt. Maria, 5 dms. 5
Sydney, 1 --

Dried Blood—
Las Palmas. 10 t. £77

Magnesia—
Barcelona, 81 cs.
Corunna. 1
M. Video, 1
Para, 47

Manure—
Barbadoes, 25 t. £315
Gd. Canary, 10 123
Madeira, 40 500
Marseilles, 14 6 c. 43
Teneriffe, 20 65

Oxalic Acid—
Lisbon, 5 cks. £55

Paint—
Antwerp, { 27 kgs. 40 pks. / 2 cks.
B. Ayres, { 20 20 brls. / 19 cs.
Buenaire, 3
Calcutta, 100 2 dms.
Cartagena, 5
Callao, 12
C'stantin'ple, { 9 3 2 cks. / 15 brls.
Demerara, 116 4
Fiume, 23 dms
Galatz, 2 crts. 64
Genoa, 51 pks.
Gibraltar, { 63 / 3 cks.
Halifax, N.S., 15
Hamburg, { 17 2 / 6 dms.
Las Palmas, 85 8 cks.
Manaos, M. Video. 24 cs. 5 dm.
Natal, 50
New York, 1
Para, 8 cks.
Ponce, 2
Rangoon, 14
St. John's, Nfd, 202
St. Thomas, 1
San Juan, 2 brls.
Sierra Leone. { 4 / 168 pks.
Valparaiso, 24 cs. 8 cks.
Wellington, 250 dms.

Painters' Colours —
Akassa, 10 kgs.
Alexandria, 10 dms.
Arecibo, 146 2 brls.
Bahia, 65 38 20 cs.
Boston, 26
B. Ayres, 50 pks.
Calcutta. 90 60 cs 4 cks.
Coquimbo, 62 brls.
Leghorn, 23
Manaos, 1 cs.
Nassau, 6 brls.
New York, 6 pks.
Philadelphia, 6 cks.
Ponce. 2
Pt. Natal, 903 pks.
Sagua, 2
Salonica, 2
San Juan, 235

Trinidad, 3 cks.
Valparaiso, 17 cs.

Paraffin Wax—
Genoa, 80 bgs.
Havana, 16 lgs.
Leghorn, 120
Naples, 90
Rio de Janeiro, 6 cs.
S. Luis Potisi, 30
Vigo, 10 bgs.

Phosphorus—
Tampico, 5 cs. £46

Phosphorus (Amorph.)—
Rio de Janeiro, 6 cs. £72
San Francisco, 1 17

Picric Acid—
New York, 5 t. 1 c. 2 q. £476

Potash Salts—
Savanilla, 2 t. £244

Potashes—
B. Ayres, 4 dms. £6

Potassium Bichromate—
Montreal, 3 t. 10 c. 1 q. £112
Vera Cruz, 1 4 3 41

Potassium Carbonate—
New York, 19 t. 4 c. £3,12

Potassium Chlorate—
M. Video, 10 c. £20
Naples, 2 t. 60
New York, 6 178
Rio de Janeiro, 4 18 153
Santos, 3 93
San Juan, 20 cks. 33
Sydney, 7 t. 209
Tampico, 9 15

Potassium Cyanide—
Vancouver, B C, 6 t. £540

Potassium Prussiate—
B. Ayres, 1 c. £4
Genoa, 3 t. 18 2 q. 246

Potassium Sulphate—
Natal, 10 t. 2 c. £70

Salammoniac—
Alexandria, 2 t. £66
Barcelona, 1 32
Genoa, 2 60
Smyrna, 4 cks. 15 c. 114

Salt—
Aalborg, 450 t.
Adelaide, 20
Akassa, 462 16 c.
Antwerp, 340
Archangel, 110
Baltimore, 150
Barbadoes, 100
Benin, 51 12
Boma, 24 11
Boston, 205
Brisbane, 25
B. Ayres, 100
Burutu, 925 7
Cameroons, 33 10
Demerara, 53 10
Dunedin, 5,103
Kinsembo, 7 3
Lagos, 50
Jersey, 6
Landana, 22 6
Lucea, 1 15
Matadi, 22 6
Melbourne, 130
Montreal, 856
Natal, 1 12
N. Orleans, 130
New York, 231
Noqui, 22 6
Para, 70
Philadelphia, 200
Pt. Natal, 110
Rangoon, 1,152
Rosario, 730
Rotterdam, 200
Rouen, 50 bxs. 50 cs.
Sapeli, 8 t.
Shanghai, 25
Sherbro, 67
Sierra Leone, 100
Sydney, 300 6 50 pks. 100 cs.
Talcahuano, 200
Tereberki, 448

Salt Cake—
Baltimore, 75 t. 9 c. £121
Lisbon, 30 49

Saltpetre—
Delagoa Bay, 2 t. £47
Bahia, 11 c. 1 q. 13
M. Video, 1 3 2 25

Sheep Dip—
B. Ayres, 21 t. 8 c. 2 q. £500
Blenheim, 100 dms. 50
Calcutta, 100 58
Dunedin, 250 30 cs. 162
M. Video, 6 c. 1 q. 15
Pt. Natal, 1,000 197
Sydney, 50 —
Wellington, N.Z., 600 200 cs. 510

Soap—
Aden, 100 bdls.
Alexandria, 5 bxs. 1 cs.
Algoa Bay, 6,528 198 62
,, 18 cks. 256 pks.
Amsterdam, 200
Anamaboe, 131 bxs.
Antwerp, 50
Arecibo, 1
Baltimore, 25
Bangkok, 101
Barberton, 60
Batavia, 2,750
Belgika, 100
Bermuda, 110
Bloemfontein, 10
Bluefields, 120
Boma, 40
Bombay, 36
Brass, 100
B. Ayres, 67
Buguma, 40 1
Calcutta, 50 66 500 bdls.
Cape Town, 1,750 98
Colombo, 1
Constantinople, 1
Curacao, 140
Delagoa Bay, 50 40 13
E. London, 1,050 20 6
Gibraltar, 217
Greytown, 201
Guadeloupe, 500
Hamburg, 50
Hong Kong, 10 31 dms.
Jersey, 148
Johannesburg, 500 315
Kingston, 309
Kotonou, 40
Lagos, 404
Las Palmas, 45
Madras, 3
Malta, 6 166
Manaos, 1,335
Matadi, 10
Mauritius, 737
Monrovia, 64
Montreal, 4
Natal, 1,200 40 25 bdls.
Newcastle, 1 tnk.
Opobo, 560
Palermo, 1 cs.
Para, 8,675 300
Penang, 400
Pernambuco, 1
Pt. Elizabeth, 1,700
Pt. Marie, 95
Pt. Natal, 100 32 dms.
Pretoria, 250
Rangoon, 600 30
Rotterdam, 105
St. John's, N'fd, 157 1
St. Kitt's, 260
Salonica, 120
Savannah, 100
Shanghai, 6,339
Sierra Leone, 152
Singapore, 5,186 40
Sydney, 200 17 tnks. 14 pks.
Syra, 400
Teneriffe, 1,800
Trinidad, 50
Vancouver, 3
Valparaiso, 1,000
Victoria, 100
Winnebah,

Soda—
Santos, 50 cks.

Soda Ash—
Antwerp, 600 bgs.
Barranquilla, 250 69 cks.
Boston, 233
B. Ayres, 140 brls.
Calcutta, 70 300
850 kgs.
Fremantle, 66
Hiogo, 777
Kingston, 4
Kobe, 221
Lagos, 30
Lisbon, 10
M. Video, 5
New York, 19 tcs.
Newport News, 20
Oporto, 8
Osaka, 38
Philadelphia, 70
Piræus, 30 brls.
Puerto Cabello, 16
Perth, 65
Rio Grande, 100
San Francisco, 438
Savanilla, 50
Smyrna, 70 287
Tampico, 200 bgs.
Venice, 100
Valparaiso, 50
Yokohama, 100
Zante, 32

Soda Crystals—
Barcelona, 40 bgs. 15 cks.
B. Ayres, 100
Cape Town, 25 kgs.
Halifax, N.S., 45
Jersey, 90 bgs.
Montreal, 100 56 brls.
Madras, 50 kgs.
M. Video, 40
Nagasaki, 10
Valparaiso, 150 300

Sodium Acetate—
Barcelona, 16 cks.
Montreal, 2 t. 1 c. £26

Sodium Bicarbonate—
Alexandria, 240 kgs. 16 cks.
Algiers, 55
Algoa Bay, 15 bgs.
Alicante, 20 kgs.
Amsterdam, 30
Antwerp, 165
Auckland, 100
Barcelona, 35
Bilbao, 65 brls.
Bourgas, 20 bgs.
Brazil, 60 kgs. 3
Brisbane, 30
Calcutta, 14
Christiansted, 15
Demerara, 20
Fremantle, 250
Genoa, 50
Halifax, N.S., 125
Huelva, 20
Jersey, 20 bgs.
Kobe, 350 kgs.
Leghorn, 20
Lisbon, 300
London, 75
Madras, 345
Montreal, 100 250 dms.
Nantes, 6
Naples, 100 35
New York, 100
Oran, 50
Patras, 60
Piræus, 10
Pt. Elizabeth, 30 bgs.
Progresso, 12
Rangoon, 20 kgs.
Rio de Janeiro, 20
Rouen, 50 10
St. Petersburg, 75 pks.
Salonica, 25
Santos, 30 bgs.
Sierra Leone, 30 kgs.
Tampico, 15
Toronto, 30 bgs.
Trinidad, 40 kgs.
Varna, 40
Vera Cruz, 100
Wellington, 270
Yokohama, 550

Sodium Carbonate—
Barranquilla, 25 bgs
Boston, 56 brls.
New York, 112

Sodium Chlorate—
Antwerp, 100 kgs.
Boston, 200
Monterey, 1 ck.
Montreal, 60
New York, 200
Rouen, 100
Vera Cruz, 10

Sodium Hyposulphite—
Genoa, 39 kgs. 8 cks.

Sodium Silicate—
Kingston, 10 brls.

Sodium Sulphite—
Hamburg, 17 brls.

Starch—
Smyrna, 14 cs.

Strontium Nitrate—
Habana, 4 c. £6

Sulphur—
Boston, 250 t. 3 c. £1,057
Cornwall, Ont., 25 1 103
Delagoa Bay, 2 16
Gibraltar, 1 6
Montreal, 150 638
Vancouver, B.C., 1 15
Victoria, 1 15

Sulphuric Acid—
Pernambuco, 6 c.

Superphosphates—
Gd. Canary, 27 t. 10 c.
Madeira, 40
Las Palmas, 50
Valencia, 675 2 2 q. 1,3

Tartar—
Vera Cruz, 5 c. 2 q.

Tartaric Acid—
Valparaiso, 1 c.
Vera Cruz, 2 3 q.

Varnish—
Antwerp, 24 cks.
Boston, 12 cs.
Calcutta, 1 kg.
Cape Town, 8
Demerara, 6 dms.
Genoa, 6 cks. 3
Madras, 8
Naples, 1 3
Oporto, 5
Pt. Elizabeth, 8
Rio Grande, 2
Rio de Janeiro, 2
San Sebastian, 3 brls.
Vera Cruz, 60

MANCHESTER

Week ending June 7th.

Alkali—
Germany, 100 bgs. 50 cks.

Chemicals (*otherwise undescribed*
Rotterdam, 10 kgs.

Coal Products—
Aniline Colour
Germany, 5 cks.
Aniline Salt
Germany, 2 cks.
Carbolic Acid
France, 4 cks. 2 cs. 222 btls.
Creosote Oil
Germany, 5 cks.
Naphthol Salts
Holland, 3 cks.
Pitch
Belgium, 400 t. 3 c.
Toluol
Germany, 30 dms.

Gamma Acid—
Germany, 11 cks.

Glue—
Belgium, 12 cks.

Farina—
Bombay, 66 bgs.

Salt—
Gothenburg, 150 t.

Sodium Naphthionate—
Germany, 1 ck.

Tallow—
Bombay, 191 bdls.

GLASGOW.

Week ending June 8th.

Alkali—
Timaru, 5 t. 11 c.

Ammonia—
Amsterdam, 10 t. 4 c.

Ammonium Sulphate—
Almunecar, 12 t.
Valencia, 178 2 c.

Bleaching Powder—
Bombay, 2 t. 10 c.
Dunedin, 9 10

Boracic Acid—
Hiogo, £64
Yokohama, 64

Borax—
Hiogo, £58
Kobe, 48
Melbourne, 55
Rotterdam, 44
Townsville, 39

Chemicals (*otherwise undescribe*
Dunedin, £21
Rotterdam, 8

Coal Products—
Aniline Dye
Calcutta, £28
Creosote Oil
Christiania, £40

Naphtha
Christiania, £4 4s.
Dunedin, 24
Wellington, 21
Pitch
Antwerp, £246
Bayonne, 248 15s.
Canada, 125
Danzig, 140 t.
Hamburg, 11
Santander, 694 12
Tar
Danzig, 48 t. 10c.
Rotterdam, £100
St. Petersburg, 420

Colours—
Dunedin, £83
Rotterdam, 8 10s.

Dextrine—
U.S.A., £218

Dyestuffs (*otherwise undescribed*)
Christiania, £12
Rotterdam, 2 12s.

Dyestuffs—
Indigo
Melbourne, £130
Logwood
Victoria, £52 17s.

Gelatine—
Canada, £73
New York, 938 lbs.

Guano—
Almunecar, 158 t. 15c
Valencia, 50 3 1 q.

Iodine—
Rotterdam, 1 t. 5c.

Lead Nitrate—
Paris, £200

Linseed Oil—
Alexandria, 20 t. 10c.
Dunedin, 6 16 3 q.
Havana, 4 16 2
Pretoria, 16 2
Rio de Janeiro, 2 1 3
Rouen, 2 11

Logwood Extract—
Victoria, £50

Magnesium Sulphate—
Rio de Janeiro, £34

Manganese Oxide—
New York, £105
Philadelphia, 115

Oxalic Acid—
Barcelona, £50

Paint—
Bombay, £190
Havana, 74
Invercargill, 42
Pt. Said, 85

Painters' Colours—
Adelaide, £29
Alexandria, 205
Auckland, 220
Calcutta, 124
Canterbury, 49
Dunedin, 211
Lyttelton, 68
Penang, 57
Singapore, 141

Paraffin Wax—
Barcelona, £225
Danzig, 4 t. 15c.
Paris, 47
Rio de Janeiro, 105
Rouen, 29
Valencia, 20

Potassium Bicarbonate—
Alexandria, £28
Antwerp, 233
Canada, 70
New York, 146

Potassium Bichromate—
Rotterdam, £277

Potassium Cyanide—
Melbourne, £190
U.S.A., 1,425

Quebracho Extract—
Belgium, £134 16s.

Sheep Dip—
Auckland, £170
Gisborne, 57 10s.
Invercargill, 75
Lyttelton, 685
Nelson, N.Z., 85
Oamaru, 27 10
Timaru, 25

Soap—
Bombay, 2 t. 19c.
E. London, 2 10
Puerto Cortes, 1 5

Sodium Bicarbonate—
Paris, 5 t.

Starch—
Alexandria, £210
Rotterdam, 67

Tallow—
Alexandria, 15c.
Dunedin, 6 t.
Rotterdam, 11 15

Tannin Extract—
Barcelona, £500

Turpentine—
Singapore, £47

Varnish—
Bombay, £43 15s.
Rotterdam, 1

White Lead—
Pretoria, £31

HULL.

Week ending June 3rd.

Alkali—
Helsingfors, 2 cks.

Ammonium Sulphate—
Hamburg, 394 bgs.
Rotterdam, 248

Antimony—
Abo, 2 cks.

Basic Slag—
Libau, 178 t.
Riga, 3,110 bgs.

Bleaching Powder—
Ghent, 4 cks.

Borax—
Helsingfors, 1 ck.

Caustic Soda—
Abo, 4 cks.
Rafso, 7
Wasa, 6

Chemicals (*otherwise undescribed*)
Abo, 14 cks.
Amsterdam, 27 12 pks.
Antwerp, 2
Bombay, 278 5 cs.
Boston, 93
Christiania, { 17 / 2,153 slbs.
Copenhagen, 20
Danzig, 8 pks.
Drontheim, 1
Gothenburg, 34 366 slbs.
Hamburg, 40 90
Helsingfors, 5
Karachi, 20
New York, 240
Riga, 2
Rotterdam, 2 85
St. Petersburg, 6 1 50 pks.
Wasa, 3

Coal Products—
Pitch
Antwerp, 307 t.
Wasa, 75 cks.
Tar
Antwerp, 25 cks.
Christiania, 15
Copenhagen, 25
Dunkirk, 27
Hamburg, 1
Hango, 50
Helsingfors, 226 brls.
Konigsberg, 10
Rotterdam, 14
Wasa, 60

Colours—
Boston, 2 cks.

Cottonseed Oil—
Amsterdam, 5 t.
Bremen, 2 10c.
Copenhagen, 20
Dunkirk, 7 11
Gothenburg, 3 2
Hamburg, 6 5
Norrkoping, 1 10
Rotterdam, 29 9
Stockholm, 3 19

Dyestuffs (*otherwise undescribed*)
Hamburg, 8 cks.
Libau, 1 cs.
New York, 14 25 dms.
Riga, 1

Linseed Oil—
Amsterdam, 1 t. 16c.
Antwerp, 4
Bombay, 28 7
Christiania, 6 19
Copenhagen, 4 19
Hamburg, 6 5
Karachi, 1 10

Manure—
Dunkirk, 50 t.

Molasses—
Wasa, 35 cks.

Paint—
Bombay, 286 cks.
Christiania, 3
Karachi, 3

Painters' Colours—
Abo, 180 cks.
Amsterdam, 5
Antwerp, 24 4 cs. 99 dms.
Bergen, 38
Bombay, 523 133
Christiania, 14 1
Copenhagen, 14 4 1
Danzig, 3
Drontheim, 30
Dunkirk, 1
Ghent, 73
Gothenburg, 120
Hamburg, 1
Ha lingen, 2
Helsingfors, 192 1
Karachi. 245
New York, 107 pks.
Riga, 1 4
Rotterdam, 12 4 5
Rouen, 8
Stockholm, 2

Tallow—
Amsterdam, 10 cks.
Stockholm, 15

Turpentine—
Bombay, 10 cks.
Christiania, 3

Varnish—
Antwerp, 1 ck. 3 cs.
Ghent, 1
Harlingen, 1
Helsingfors, 1
Karachi, 2

TYNE.

Week ending June 3rd.

Alkali—
Bergen, 7 t. 4c. 2 q.
Hamburg, 5 17 1
Rotterdam, 4 18 1

Barium Binoxide—
Dunkirk, 5 t. 5c. 3 q.
Naples, 11 14 3
Rotterdam, 15 1 1

Blanc Fixe—
Valencia, 1 t. 7c.

Bleaching Powder—
Amsterdam, 9 t. 18c.
Antwerp, 6 13 3 q.
Bergen, 5 4 3
Christiania, 15 3
Copenhagen, 4 15 3
Drontheim, 8 8 2
Hamburg, 40 6 2
Rotterdam, 7 8 2

Castor Oil—
Montreal, 51 t. 5c. 1 q.

Caustic Soda—
Antwerp, 19 t. 14c. 2 q.
Copenhagen, 4 18 2
Genoa, 57 11
Montreal, 16 14 3
Sourabaya, 58 3

Chemicals (*otherwise undescribed*)
Montreal, 87 t. 1c. 1 q.

Coal Products—
Carbolic Acid
Rotterdam, 5 t. 11c. 3 q.
Tar
Uleaborg, 7 t. 2c. 2 q.

Colours—
Genoa, 1 t. 14c.
Montreal, 1 17 1 q.

Iron Oxide—
Genoa, 5 t. 9c. 2 q.

Linseed Oil—
Montreal, 1 t. 8c. 2 q.

Litharge—
Amsterdam, 5c. 3 q.
Genoa, 1 t. 4
Hamburg, 2 3

Magnesia—
Hamburg, 1 t. 11c. 2 q.
Rotterdam, 5

Manure—
Randers, 6 t. 10c.
Valencia, 220

Mercuric Oxide—
Genoa, 1 t. 15c.

Oxalic Acid—
Genoa, 6c. 3 q.

Paint—
Copenhagen, 4c.
Drontheim, 6 1 q.
Hamburg 2 t. 10
Stavanger, 6

Phosphorus—
Valencia, 2 t. 4c. 3 q.

Pyridine—
Hamburg, 14c. 3 q.

Red Lead—
Amsterdam, 4 t. 9c. 3 q.
Christiania, 3 4 2
Copenhagen, 3 16 1
Genoa, 24 13 3
Hamburg, 11 6
Stavanger, 2 14 1
Uleaborg, 7 1

Soap—
Copenhagen, 9 bls.

Soda—
Amsterdam, 10 t. 4c. 1 q.
Christiania, 12 10
Rotterdam, 5 3
Uleaborg, 16 1

Soda Ash—
Wisby, 60 t. 2 q.

Sodium Silicate—
Leghorn, 8 t. 1c. 1 q.

Sulphur—
Christiania, 50 t.

Tallow—
Genoa, 10c. 3 q.

Varnish—
Montreal, 14c. 3 q.

White Lead—
Copenhagen, 1 t.
Montreal, 75 19c. 2 q

Zinc Ashes—
Rotterdam, 8 t. 16c. 2 q

GOOLE.

Week ending May 31st.

Chemicals (*otherwise undescribed*)
Amsterdam, 2 cks. 1 cs.
Ghent, 7
Hamburg, 20 dms.
Rotterdam, 15

Coal Products (*otherwise undes.*)—
Amsterdam, 99 cks.
Boulogne, 1 2 cs.
N. Orleans, 200
Rotterdam, 25 1

Coal Products—
Pitch
Antwerp, 754 t.

Dyestuffs (*otherwise undescribed*)
Amsterdam, 1 ck.
Antwerp, 1
Ghent, 50 bgs.
Hamburg, 4 cks. 2 cs.

Manure—
Antwerp, 551 bgs.
Hamburg, 500

Painters' Colours—
Amsterdam, 200 tins
Antwerp, 1 ck. 5 cs.
Rotterdam, 7 1 crte.

GRIMSBY.

Week ending June 3rd.

Alkali—
Hamburg, 24 cs.
Port au Prince, 104 dms.

Caoutchouc—
Gothenburg. 1 ck. 1 bl.
Helsingborg, 14 bs.

Chemicals (*otherwise undescribed*)
Malmo, 10 cs.

Coal Products (*otherwise undes.*)—
Hamburg, { 2 brls. / 8 btls. 10 pks.

Colours—
Port au Prince, 6 cks.

Dyestuffs—
Logwood
Gothenburg, 10 bgs.

Painters' Colours—
Antwerp, { 6 kgs. / 2 cks. 1 cs.
Hamburg, 5 pks
Rotterdam, 2

PRICES CURRENT.

WEDNESDAY, June 14, 1899.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9	&	8/3
,, Glacial .. .. ,,		35/-	
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	9
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	10¾
Picric .. .. ,,	0	0	11½
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2
Tartaric .. .. ,,	0	0	11¾
Arsenic, white powdered .. .. nett per ton	19	5	0
Alum, loose lump .. .. ,,	4	5	0
Alumina Sulphate (pure) .. .. ,,	3	15	0
Aluminoferric .. .. ,,	2	2	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2¾
,, = 24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3¼
,, Muriate .. .. per ton	21	10	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	12	7	6
,, ,, (grey) Hull .. .. ,,	12	6	3
Aniline Oil (pure) .. .. per lb.	0	0	4½
Aniline Salt ,, ... ,,	0	0	4
Antimony .. .. per ton	39	10	0
,, (tartar emetic) .. .. per lb.	0	0	8
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	12	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	4	2	6
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6¼
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. .. ,,	17/-	to	25/-
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	6½
,, 50/90 ,, ... ,,	0	0	7
Carbolic Acid (crude 60°) .. .. ,,	0	2	1
,, (crystallised 40°) .. .. .. per lb.	0	0	7¼
,, (liquid 95/97%) .. .. .. per gallon	0	1	0
Creosote (ordinary) .. .. ,,	0	0	3½
,, (filtered for Lucigen light) .. .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	3	0	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	5	0
Solvent Naphtha, 90% at 160° .. .. per gallon	0	0	10
Copper .. .. per ton	75	15	0
,, Sulphate .. .. ,,	25	10	0
,, Oxide (copper scales) .. .. ,,	57	0	0
Glycerine (crude) 80% .. .. ,,	24	0	0
,, (distilled S.G. 1250°) .. .. ,,	48	10	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	2	6
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	15	7	6
,, Litharge Flake (ex ship) .. .. ,,	17	0	0
,, Acetate (white ,,) .. .. ,,	23	0	0
,, ,, (brown ,,) .. .. ,,	18	0	0
,, Carbonate (white lead) pure .. .. .. ,,	18	10	0
,, Nitrate .. .. ,,	22	10	0

	£	s.	d.
Lime, Acetate (brown) (ex ship) .. .. .. per ton	4	17	6
,, ,, (grey) (ex ship) .. .. ,,	8	0	0
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton	9	10	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	14	15	0
,, Borate .. .. per cwt.	2	0	0
,, Ore, 70% .. .. per ton	3	10	0
Methylated Spirit, 61° O.P .. .. per gallon	0	2	0
Naphtha (Wood), Solvent .. .. ,,	0	2	10
,, ,, Miscible, 60° O.P. .. .. .. ,,	0	3	9
Oils:—			
Cotton-seed .. .. per ton	17	10	0
Linseed .. .. ,,	21	10	0
Stearine .. .. ,,	26	0	0
Phosphorus (Yellow) .. .. per lb.	0	1	11
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	15	15	0
,, Chlorate .. .. per lb.	0	0	3½
,, Cyanide, 98 % .. .. ,,	0	1	0½
,, Hydrate (Caustic Potash) 90 % .. .. per ton	22	0	0
,, ,, ,, 75/80 % .. .. ,,	17	15	0
,, Potash Hydrate Liquid 50 % .. .. ,,	11	10	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	2	12	6
,, Prussiate Yellow .. .. per lb.	0	0	8
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	0
,, Muriate, 80 % ,, ... ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3 11/16
Sodium (metal) .. .. per lb.	0	2	6
,, Carb. (refined Soda-ash) 48 % .. nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	5	0
,, ,, (Carb. Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Soda Crystals) .. .. .. ,, ,, (f.o.r. w'ks.)	2	10	0
,, Acetate (ex-ship) .. .. ,,	12	15	0
,, Arseniate, 45 % .. .. ,,	13	10	0
,, Chlorate .. .. per lb.	0	0	3¼
,, Borate (Borax) .. .. nett per ton	16	0	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton (10 ton lots)	7	12	6
,, ,, (74 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	0	0
,, ,, (60 % Caustic Soda) .. ,, ,, (10 ton lots)	6	0	0
,, ,, (pure liquor 90° Tw.) .. ,, ,,	3	10	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate (cwt. kegs) .. .. ,,	6	15	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25 % .. .. ,,	15	10	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	8	0
,, Nitrite, 98 % .. .. per ton	26	0	0
,, Phosphate .. .. ,,	10	7	6
,, Prussiate .. .. per lb.	0	0	6¼
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	10	0
,, Stannate, 40 % .. .. per cwt.	3	10	0
,, Sulphate (Salt-cake) .. .. per ton	1	6	6
,, ,, (Glauber's Salts) .. .. .. ,,	1	12	6
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	5	2	6
Strontium Hydrate, 100 % .. .. ,,	9	10	0
Sulphocyanide Ammonium, 95 % .. .. .. per lb.	0	0	6
,, Barium, 95 % .. .. ,,	0	0	4¼
,, Potassium .. .. ,,	0	0	7
Sulphur (Flowers) .. .. per ton	6	15	0
,, (Roll Brimstone) .. .. ,,	6	0	0
,, Brimstone: Best quality .. .. ,,	4	12	6
Superphosphate of Lime (26 %) .. .. ,,	2	10	0
Tallow .. .. ,,	24	0	0
Tin Crystals .. .. per lb.	0	0	7⅞
,, English Ingots .. .. per ton	120	0	0
Zinc (Spelter) .. .. ,,	27	0	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	7	10	0
,, Sulphate, Crystal .. .. ,,	7	15	0

THE

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LATE ADVERTISEMENTS.

TENDER.

COUNTY BOROUGH OF SALFORD.

(GAS DEPARTMENT.)

SPENT OXIDE.

THE Gas Committee invite Tenders for the Purchase of about 445 Tons SPENT OXIDE at their Regent-road and Bloom-street Works.

Full particulars may be obtained on application to the Gas Engineer, Gas Offices, Bloom-street, Salford.

Sealed Tenders, endorsed "Tenders for Spent Oxide," and addressed to the Chairman of the Gas Committee, Town Hall, Salford, to be delivered to me not later than 3 p.m. on Thursday, the 29th June, 1899.

By Order,
L. C. EVANS,
Town Clerk, *pro tem.*

Town Hall, Salford,
14th June, 1899.

WANTED, Chemical Plumber and Lead Burner in Acid Works near London; permanent work for competent man; state age, experience, and wages.—Address, "Burner," *Chemical Trade Journal* Office, Manchester.

WANTED, Superintendent, Bleach Plant abroad. Desire to make early engagement with expert acquainted with best practice and having knowledge of all forms of mechanical absorbers. State experience and compensation.—Address, "W. A.," *Chemical Trade Journal* Office, Manchester.

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Readers are invited to forward items of intelligence, or cuttings from local newspapers, of interest to the trades concerned.

THE BICHROME INDUSTRY.

A CHEMICAL TRADE EPISODE.

BICHROMATE of potash, as technically named, or bichrome, as commercially called, has been known as a dyer's chemical since the beginning of the present century. During the first years of the century, however, it was hardly heard of outside the laboratory, and was not produced except in experimental, or, at least, very insignificant quantities. Its valuable qualities in the dyehouse came somewhat tardily into recognition, and during the first quarter of the century it had been but sparingly used in trade.

About seventy years ago the extension of the dyeing trade in Glasgow, and the growing industry of calico-printing following in the wake of textile manufacturing, first made feasible the production of bichrome on a fairly commercial basis. At that time the brothers John and James White, sons of Dr. White, of Paisley, rented a disused soap works at Rutherglen, near Glasgow, and there established, on a very modest scale, the nucleus of the large and straggling congeries of buildings since known as Shawfield Chemical Works.

From the beginning the product of the works has been bichromate of potash, and so rapidly did it gain place as a staple in the dyeing and calico-printing trades that the Shawfield Works soon grew to considerable dimensions; and the output speedily rose from tens to hundreds, and from hundreds to thousands of tons per annum. Notwithstanding this growing demand the monopoly of the manufacture long remained in the hands of the original makers, who had thus the regulation of both production and price, and this price was at a very profitable level. The cost of raw material and transport was higher then, and the outlay at every stage of the manufacturing process was much greater than in later years; but, at the eighteen pence a pound charged in these halcyon days, the profit realised was a wonderfully fat one. Even when reduced to a shilling, and to tenpence, assuming cost price as double what it now is, the profit was not far from cent. per cent. But this condition of unopposed trading felicity could not always last. It is difficult to see how Glasgow should have been allowed so long to remain not only the centre but the sole habitat of the bichrome manufacture. Coal, it is true, is easily obtainable, but all raw material has to be imported here the same as to other parts of the United Kingdom; muriate of potash from mid-Europe; pyrites from Spain; and chrome ore from Turkey and Greece. After a long and prosperous career as monopolists the Shawfield firm had to submit to the intrusion of a strong rival when Messrs. Stevenson and Carlisle, Ltd., established themselves as manufacturers of bichrome at Milburn-street, Townhead, Glasgow, and soon the new entrants were turning out a pretty liberal moiety of the total production. Reduction in selling price was resorted to as a weapon against the invaders of the

trade preserve, but this was not carried to any very serious extent, and the resulting 10d. per lb. left a margin between cost and selling price sufficient to ensure a splendid return to both sharers in the now divided industry. The two firms continued to rub along, with no great mutual liking mayhap, but without attempt at running each other off the field.

This peaceful state of matters continued a good many years until, in the early seventies, another claimant entered for a share of the abundant earnings of the bichrome trade. The Eglinton Chemical Company, a limited liability concern consisting of a couple of dozen shareholders carrying on business as limestone quarry lessees, began to build chemical works at Irvine, a seaport on the Ayrshire coast about 30 miles from Glasgow. It could not long be hidden that these works were to be used exclusively in the manufacture of bichrome, and the established manufacturers were from the first distinctly inimical. The tempting (by a bigger salary and a donation of shares) of the Shawfield Work's manager into the service of the new company did not tend to sweeten matters, and no sooner were the Irvine works ready to make their first deliveries of bichrome than the price was dropped twopence per pound. This made the selling price 8d. per lb., but with improved methods of manufacture and consequent reduction in cost of output, profits were still more than handsome. But the selling price was not allowed to remain long at this slightly reduced rate. It was evidently thought the new company could be shouldered off the track, or at least seriously crippled before the older and better equipped makers were much the worse. So, in a twelvemonth, another penny was dropped. Even at 7d. per lb. the price was quite sufficient to keep the new company in heart, and stubbornly the contentious race was continued. From year to year another and another penny was dropped, bringing the price to 5d. less 6%, at which point a pause was made, and this figure held for several years. Then the struggle became keener, but as the margin of profit was now so much lessened the paring down had to be done with less lavish hand, and successive reductions were made by a halfpenny, and latterly by a farthing a pound. As matter of course the longer this struggle lasted the more embittered did it become, and the more was personal rancour infused. In less than five years from the start of the Irvine works the price of bichrome was reduced from 10d. to 5d. per lb. But this comparatively low-level mark being reached only made the strife more venomous and hope of compromise more unlikely. At this time, be it remembered, nearly the whole consumption of Europe (of the world it might almost be said) was supplied by the Glasgow and Irvine manufactories. A manufactory in the neighbourhood of Moscow produced nearly all that was needed for Russia, but no part of this production was exported; and, now and then, taking advantage of a favourable turn in freights or tariffs, the Scotch makers managed to place a few hundred tons in St. Petersburg at a trifle under the price obtainable here. The United States of America also manufactured their own supplies to a large extent, but several thousand tons annually were also taken from this country at a slight reduction on the home price. With something like a monopoly of the world's markets for bichrome there was no need for the Glasgow makers cutting prices so ruinously against each other, but even with this absence of outside pressure the strife went on. Fraction by fraction the 5d per lb. was whittled down to 4d., and then, by one per cent. at a time of augmented discount, the lowest point touched in this unnecessary struggle, 3⅛ d. per lb less 10%, was reached. This is equivalent to 3·15d. net, and the cost price at that time was not much short of 3d. per lb., say 2.75d., leaving a profit of 0·4d. per lb., or a little over 10 per cent. on selling price. Thus, in little more than a decade, a manufacture which had all along remained in so few hands as to be a practical monopoly, was forced down by the makers themselves until a very narrow margin alone remained of the abounding breadth of profit formerly realised. But now, either the folly of the whole procedure or the loss imminent upon a continuance of the strife, had come home to the three parties concerned. Tentative soundings of the three West of Scotland makers were begun; negotiations were duly opened which, after some months, resulted in an agreement, the only other maker in Britain (Sowerby Bridge, Yorkshire), producing only a few tons per annum, acquiescing.

The terms of the agreement were, that each maker should adhere to an officially recognised price and produce only the quantity allotted as his share of the total production; about one-half being allowed to the Shawfield Works; the remainder, in agreed proportions, being made over to the Townhead and Irvine makers; Russian and American shipments to be mutually supplied in like proportions; and breach of terms to be punished by heavy fine. With such secrecy and success was the agreement arrived at, and so complete was the ignorance of the drysaltery trade of any impending change of policy, that many of them had sold back to makers at the low price considerable quantities of bichrome held. Then, simultaneously, the three manufacturers issued their circulars announcing to the astounded drysalters that the price of bichromate of potash was raised to 5d. per lb. less 5%.

An attempt was afterwards made to bring the price to a higher level. The figure was set at 7d., then reduced to 6d., but this could not be maintained; and the introduction of bichromate of soda into the trade made impossible any further attempt at levelling up.

Thus ended the war among the manufacturers, and this "triple alliance" was well and loyally adhered to.

Then, several years later, the big syndicate was proposed, which eventually took the concrete form as the United Alkali Co., Limited. Overtures were made to all the bichrome makers for the purchase of their works, but in one case only (Eglinton Chemical Co.) were the proposals entertained, the other two makers, Shawfield and Townhead, Glasgow, declining to treat. The Irvine Works were acquired by the U.A. Co. as a going concern for the lump sum of £180,000., but, shortly after taking possession, the company decided to give up the manufacture of bichrome, and so ceased to influence the trade.

The bichrome manufacture in this country is now confined to the two makers at Shawfield and Townhead, Glasgow, who have maintained close agreement, and sell their joint production through an agency. But now the long enjoyed exclusive and undisputed possession of the European field as an outlet for their production is no longer theirs. Works are springing up on the Continent, notably in Germany, and not only are continental wants in large measure supplied, but even the home market is not secure from this new competition. Under these altered conditions the price, which, at the advent of the United Alkali Co. in 1890, stood at 5d. less 5 per cent., has now dropped to 3¼d. less 6½ per cent., a figure fully 3½ per cent. under the lowest price touched in the crisis of the internecine war.

A curious indirect, but, perhaps, inevitable, result of the long and bitter rivalry among the makers of bichrome, is the effect this had on the procedure of those middlemen who, during that fighting period, supplied the article to the actual consumers; and the attitude eventually assumed by dealers and consumers. These dealers had, at first, just, if not handsome, profits, but, when the cutting fairly set in among makers, dealers began to cut also, and customers were ready enough to take advantage of the new policy. Orders came to be procurable only by those who could, or would, quote a trifle (one, or even a half per cent, was about the extent of the lure) under their neighbours. Drysalters, accordingly, diligently underbid each other, trusting to come out right by playing off maker against maker, and securing concessions *sub rosa* or otherwise. But, when the makers combined and raised the price to a figure to pay themselves, the drysalters found it impossible to follow so excellent an example. A league embracing three manufacturers was easily initiated, and maintained with a solidity unattainable by the hundreds of outside dealers. So it fell out that dealers have now to be content to turn over bichrome practically without profit, or leave it alone. So fully is this recognised that none of them hanker after the trade; they don't ask orders, and only consent to fill them for regular customers, or when accompanied by orders for something else more profitable.

About 1880 there was considerable talk over a new process of tanning leather by the use of bichrome. A German chemist was the inventor, and the process was taken up and exploited in this country by the Eglington Chemical Company. The leather trade was deluged with pamphlets setting forth the merits of the new process, which was to produce better leather at half the cost of ordinary methods. Licenses were offered under the patents, with royalties payable on basis of output, and nothing less was aimed at than complete revolutionising of the leather trade. The promoters of the new process anticipated an enormous increase of consumption in bichrome, all of which, of course, was to be bought from them by their licensees. But leather people are not easily carried away; nobody wanted a license, and after the expenditure of a large amount of money the chemical company were left to work the process themselves on a very small scale. After the expiry of the patents, the process, or a modification of it, was adopted here and there, and worked on very restricted lines. But experience has shown that bichrome can only be safely used in very minute proportions, as a colouring, rather than a tanning agent. "Chrome" gives the leather little except its name, and the process has had no practical effect on either the production or consumption of bichrome.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Rubber Substitute. A. Cairns. 11,588. June 5.
Oil Purifying Apparatus. C. Frowein. 11,605. June 5.
Plates for Secondary Batteries. H. Leitner. 11,657. June 5.
Electrolytic Extraction of Metals. W. P. Thompson. 11,678. June 5.
Extracting Precious Metals from Ores. Golden Link Consolidated Gold Mines, Ltd., and H. J. Phillips. 11,736. June 6.
Extracting Grease from Wool. W. Erben. 11,772. June 6.
Fertilising Substance. J. Golding. 11,847. June 7.
New Bismuth Compounds. G. B. Ellis. 11,866. June 7.
Gas-washing Apparatus. N. A. Guillaume. 11,838. June 7.
Chromium Oxide by Electrolysis. E. A. G. Street. 11,879. June 7.
Furnaces for Refractory Ores, or Garbage, and the Recovery of Bye-products W. Smethurst. 11,894. June 7.
Preparation of Tungstates and Tungsten Alloys. G. T. Holloway and H. W. Lake. 11,907. June 8.
Electrolytic Apparatus. T. C. I. Wilhelm and H. Richard. 11,930. June 8.
Manufacture of Oil Colours. A. Turski. 11,917. June 8.
Manufacture of Artificial Cryolite. D. Matthews and The British Aluminium Co., Ltd. 11,963. June 8.
Manufacture of Titanic Acid. D. Matthews and The British Aluminium Co., Ltd. 11,964. June 8.
Apparatus for the Bacterial Treatment of Sewage. W. C. C. Pakes. 11,994. June 9.
Apparatus for the Treatment of Sewage. W. Pare. 11,995. June 9.
Fireproofing Wood. F. Player and P. Holmes. 12,008. June 9.
Manufacture of Water Gas. A. J. Boult. 12,047. June 9.
Manufacture of Metallic Oxides. J. Y. Johnson. 12,066. June 9.
Alloy and Process for Making same. C. T. Hennig. 12,129. June 10.
Fire Proofing Solution. L. Hart. 12,135. June 10.
Mixed Anhydrides of Formic and Organic Acids and Products therefrom. A. Béhal. 12,157. June 10.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in the Treatment of Oils and Essential Oils, particularly of Drying Oils. C. de la Roche, 6, rue Gaston de St. Paul, Paris. Eng. Pat. 26,539. December 15, 1898.

Linseed oil is mixed, in the cold, with about 10 per cent. of powdered calcium carbide and stirred in an ordinary mixer. The carbide attracts all moisture, and the mucilaginous matters are precipitated; after settling or filter-pressing a light, almost colourless oil results, which is lighter than any oil that can be obtained when dehydrating by heat. Any acetylene gas given off is collected. This gas is also generated from the press-cake by using water charged with caustic potash to "cut" the fatty matters and expose the undecomposed carbide. The works may thus be lighted by acetylene by the waste from the treatment.

Manufacture of a Base for Igniting Compounds more particularly for Use in the Manufacture of Matches. E. F. Trachsel, 315, Russestrasse, Reval, Russia. Eng. Pat. 7,114. April 4, 1899.

Hyposulphite of lead and potassium bichromate are mixed into a fine paste with water, and allowed to react. The colour changes from yellow to red, and the reaction may be deemed complete when the mixture no longer coagulates glue. The product is then mixed with chlorate of potash, antimony sulphide, sulphur, and some binding agent such as glue or gum, together with a suitable amount of any restrainer in the shape of manganese dioxide, powdered glass, etc. The resulting mixture will ignite by friction on any unprepared surface. Matches so made bear transport well, and can be heated to a tolerably high temperature without igniting. Their activity is attributed to the formation of bichromate of lead. The patentee suggests the following as suitable proportions for compounding the tipping paste:—Lead hyposulphite, 20/30 parts; potassium bichromate, 6/9 parts; potassium chlorate, 60 parts; sulphur and antimony, 6/8 parts each; manganese dioxide, 5/8 parts; and glue, 6/10 parts. Lead acetate and other lead salts may be used in place of the hyposulphite, and other oxygen-bearing salts may be substituted for the chlorate.

Improvements in or Relating to Electrical Furnaces more particularly applicable for the Production of Calcium Carbide. W. L. Durban, 43, Park-road, S. Tottenham, and J. Gore, Vernon Villa, Park-street, Trowbridge, Wilts. Eng. Pat. 14,132. June 25, 1898.

The furnace consists of a horizontal trough-shaped chamber built up of slabs of refractory material supported by metal frames at the ends, the frames being held together by tie-rods. The electrodes are adjustable and lie parallel with the trough, which is charged full up with the carbide-producing mixture. There are five figures.

Improvements in the Process of and Apparatus for Preserving Wood. C. Tschurl, IV. Liniengasse 14, Vienna, Austria, and C. Petraschek, I. Hegelgasse 6, Vienna. Eng. Pat. 15,656. July 16, 1898.

This patent is essentially of a mechanical nature, having reference more particularly to the arrangement of the plant for treating the wood. The two ends aimed at are to dry the wood properly before treatment with tar, etc., and to cool the treated wood before it comes into contact with the air. Two drying chambers are, therefore, used. Into one fresh wood is charged, and into the other the hot treated wood. By the aid of suitable reversible valves an exchange of temperature and air is effected which achieves the two ends in view. A modified process is also described, the whole being illustrated by four figures.

Improvements in the Treatment of Sulphide, Complex or other res or Mattes, and the Recovery of Metals therefrom. J. Armstrong, 13, Sherborne-lane, London, E.C. Eng. Pat. 11,895. May 25, 1898.

The ore is first roasted, and then mixed with about one-third its weight of crude carbonate of soda, and carbon to about one-sixth the amount of soda used. The mixture is then furnaced with a strong heat in a blast or reverberatory furnace. Ores containing precious metals are previously mixed with lead ore, and a reducing flame is maintained in the furnace, working with an orange-red heat. The alkali can largely be recovered from the slag, and the crude materials used in the manufacture of soda can be employed in the place of the finished product with like results.

Improvements Relating to the Treatment of Peat. E. Rischgitz, Cambridge Lodge Studios, Linden Gardens, Bayswater. Eng. Pat. 11,799. May 24, 1898.

A solution of strontium or barium hydrate is mixed with the peat, either after or during the process of disintegration. Only sufficient is used to make the peat into a semi-plastic mass to facilitate removal for drying. When the peat is very impure a solution of calcium carbonate is used. In hot countries where the drying can be done by natural means a solution of calcium hydrate and saccharine may be used to give a thicker mixture. The proportions which the patentee suggests vary between very wide limits such as from 0·5 ounce per lb. of peat to 2·5 or even 5 ounces per lb. according to the climate.

MR. BALFOUR AND THE PETROLEUM BILL.

"LEST WE FORGET."

"I WAS not aware," said Mr. Balfour on Monday, "that a promise was given to introduce the Petroleum Bill in the course of the present session." He seems to have a wonderful faculty of forgetfulness, says the *Star*, for on March 15 he was sitting *on the Ministerial Bench when Mr. Jesse Collings asked the House to reject Mr. Reckitt's Bill* for raising the flash-point on the ground that:—"The Government had decided to deal with the question long before Parliament met, and their Bill was now in a forward state of preparation." He also heard Mr. Collings declare that:—"The Government had a Bill to deal with lamps and the whole question, *which they hoped soon to introduce.*" Mr. Balfour said he would like to see the terms of the promise. Well, could anything be more explicit than the pledge given on March 17? In reply to Mr. Duncome, Mr. Collings said:—"The Government Bill on the subject will be introduced *as soon after Easter as possible*, but no precise date can be given." (*C.T.J.*, 618, p. 202) Mr. Balfour has the less excuse for his negligence in view of the fact that protests against the failure of the Government to fulfil their promise have been repeatedly made both in the Press and in the House. In the circumstances Mr. Balfour is in honour bound to give the House satisfaction for a broken pledge by pushing the Bill on without delay. We are glad to see that Mr. Balfour promised that if a promise was made to introduce the Bill during this session, that promise would "of course" be carried out. He might strengthen his resolution by pondering over the human anguish which hangs on the promised Bill. Already this year fifty-eight preventible deaths have been caused by explosions of low-flash oil. (See also page 414.)

A NEW INDICATOR FOR ACIDIMETRY.—The body consists of the diazo colour which is prepared by treating an alkaline solution of guaiacol with diazoparanitraniline. It is a brown substance, insoluble in water, and soluble in alcohol; 0·20 gramme dissolved in 100 c.c. of spirit forms an indicator exceeding phenolphthalein in sensitiveness, bright red in alkaline liquids, greenish-yellow with acids.

Correspondence.

**** We do not hold ourselves responsible for the opinions expressed by our correspondents.*

THE NEW PRESIDENT OF THE SOCIETY OF CHEMICAL INDUSTRY.

(To the Editor of the Chemical Trade Journal).

Sir,—You have informed us that Dr. Chandler, of New York, has been selected by the Council of the Society of Chemical Industry to be the next President of the Society. Hundreds of chemists in this country have never heard the name, and cannot judge whether he is a proper person for the post or not. Such is fame! I hope the growth of this Society will enable chemists on the different sides of the Atlantic to become better acquainted with each other, and with the work that is being done on the other side from themselves. Great colleges, each with several professors for chemistry where our colleges have only one, and with laboratories larger than our largest, are numerous in America, and we islanders have perhaps never heard the names of the cities, colleges or professors. I speak with sharp appreciation of my own ignorance.

Charles Frederick Chandler studied chemistry in Germany, and received the Ph.D. degree from Göttingen in 1856. Since then he has received the degree of M.D. from the University of New York and LL.D. from Union University. He has been Professor for 32 years. He is 61 years old, and was born in the State of New York. He is Professor of Chemistry in the School of Arts, the School of Mines, and the College of Physicians and Surgeons of Columbia University, in New York, and Professor of Organic Chemistry in the College of Pharmacy. He has been Dean of the Faculty of Applied Sciences, Columbia University, since 1864. He was for six years chemist to the Health Department of New York City, and for 11 years president, and for several years was a member of New York State Board of Health. The New York *Times* tells us that he is chemist for the Standard Oil Company and for the Welsbach Light Co. He has been twice President of the American Chemical Society. He is an active member of the New York Section of the Society of Chemical Industry, and was the last chairman.

In this country and in Europe he is best known for his experiments with petroleum lamps, and the fight he had against the influence of the refiners when raising the standard of flash in New York to a safe point. He burned lamps of different kinds in chambers of various natural temperatures, and noted the temperature of the oil left in the reservoir. He advocated a standard above the highest temperatures so got, and he condemned as dangerous the attempt to make the burning of low-flash oil safe by stipulations as to lamp, such as our Home Office here has been attempting. His position is best shown by a quotation from his "Report on Petroleum Oil to the Department of Health, City of New York, 1871"; and it is the position taken up by every scientific man in America who has taken up the subject—viz., White, Peckham, Stoddart, Bird, Marvin, etc.

Regarding safety lamps, he says:—"No matter how they realise the idea of protecting the oil they contain from explosion, they are treacherous friends. They allay one's fears of explosive oils, and the accident which is always much more likely to occur outside than within lamps, is just as likely to take place.

"The lamp is dropped or broken; it is filled when burning; the servant neglects to screw in the wick-tube; the oil-can is upset or left uncorked, or the servant uses the oil to kindle the fire. In some way or other fire gets to the vapour of the oil, and an explosion occurs. Even when the 'safety lamp' has an ally in the form of 'safety can,' it still fails to make naphtha safe. It is an axiom that *no lamp is safe with dangerous oil, and every lamp is safe with safe oil.*

"Half the so-called 'safety lamps' are no safer than those which make no claim to safety; while the other half are only safe as long as they are in perfect order and subject to no carelessness in the filling or handling. Persons will be careless and thoughtless; it is human nature to be so. What we want is *safe oil; with it all lamps will be safe.* The safety lamp is positively objectionable, as it leads persons to purchase dangerous oils without question.

"It is not possible to make gasolene, naphtha, or benzine safe by any addition that can be made to it. Nor is any oil safe that can be set on fire at the ordinary temperature of the air.

"The increased expense of this plan of refining would not reach more than three or four cents per gallon. (Price of kerosine at that time was 1s. 6d. a gallon.) This addition would be cheerfully paid by the consumer, to insure himself and his wife and family from a horrible death.

"'But,' the refiner says, 'I cannot get the advanced price because the consumer does not know my oil is safer than the cheaper article.' This is true, and *the only hope is in strict laws, rigidly enforced, which will make it a crime to sell unsafe oil.*

"It is apparent that 100° F. is too low a standard of safety (old open test); 120° F. would not be too high a standard, and its adoption would not add three cents per gallon to the cost of the oil."

Nothing could be clearer than this, and more in accord with science and common sense; and, moreover, it is in agreement with all that has been put forth by scientific men in Europe—such as Mendeleeff, Victor Meyer, Thörner, &c.—as well as all the Americans mentioned before.

The one point against Dr. Chandler is that he came over to this country to contradict all this, being called as a witness to give evidence for the Anglo-American Oil Company. He confessed he had made no new experiments on safety; that he never published before his change of views; and that he would never think of advocating a lowering of the standard in New York. Yet he approves of 73° F. as the standard for this country. Now, an oil of 73° F. flash-point, in any fairly large quantity, would take fire at the ordinary temperature of the air in summer, and very readily from 83° to 93° F. if a light were applied to its surface. Nobody can, with truth, deny that; and I think everyone, not hired as a special pleader, must acknowledge that Dr. Chandler was right when he said, "Nor is any oil safe that can be set on fire at the ordinary temperature of the air." 73° to 93° F. is the ordinary temperature of summer in England. And yet he says that an oil of 73° F. flash is safe for us!

I therefore object to Dr. Chandler because he has given expert evidence here that he would never have dared to put before a scientific society, and also because he no longer is representative of American science. When the Council went out of this country for a president they should have chosen one that we could all unite in honouring and welcoming, and one truly representative of America. To choose one that was objectionable to many of us here, and even more so to some in America, showed want of tact or probably want of courage. The S. O. Co. clique in London want their colleague to be whitewashed, and they know how to take advantage of the unsuspiciousness of English gentlemen and their politeness to a foreigner.

I know well the labours of the Council for the Society and also their sincerity of purpose, and it pains me to do anything but heartily concur in anything they propose. I am quite aware of my own insignificance, and, for ought I know, I may perhaps be the only chemist in Britain who would object to Dr. Chandler. The matter, however, is so serious, and our profession so ignorant of all about flashspoint, that I am forced to make my public protest against one who has acted as Dr. Chandler has done receiving any special honour here at present.—Yours, &c.,

Broxburn, June 12, 1899. D. R. Steuart.

THE MINERAL INDUSTRY OF LAURIUM.

For the first time there was a marked decline during 1898 in the exports from Laurium (Piræus) to the United Kingdom, which are now limited to manganese, iron ore and hematite. All the more valuable products, such as pig-lead, calamine, and galena finding their way to Belgium and France. England, which has hitherto been the principal customer, is now third on the list.

The total value of exports during the year was £673,947., against £543,929. in 1897, an increase of £130,018. Of this total, the United Kingdom took £96,583. worth of manganese iron and hematite ore, £63,220. in British, and £33,363 in foreign bottoms. This shows the great falling-off in the custom of the United Kingdom, above referred to, for in 1897 Great Britain took £192,304. worth, and in 1896, £300,843. worth. On the other hand, the export trade with other countries has increased by £351,625. compared with 1897.

The amount of the various minerals exported was as follows;—

	Tons.
Pig lead	18,059
Hematite iron ore	112,088
Raw and roasted manganese ore	219,265
Zinc ore (roasted)	23,053
Blende and lead ore	1,550
Lead smokes	2,750
Speiss	300

MINING AND SMELTING.

The following is the marketable output from the mines all over the district during 1898:—

	Quantity—Tons.
Manganese iron ore (raw and roasted)	262,782
Hematite iron ore	169,443
Calamine or zinc ore	24,024
Galena	2,536
Blende of zinc and lead ore	1,255
Lead smokes	2,800
Total	462,840

This is the largest quantity ever yielded by these mines, and is an

increase of 86,243 tons on the preceding year. Out of 300,724 tons of raw material, 18,802 tons of silver pig-lead was produced.

In addition to the above marketable ores, the mines have yielded the following raw material :—

	Quantity—Tons.
Mineral grounds or ancient pit refuses	207,080
Rich galena...	2,758
,, lead ores	12,645
Lead carbonates	106,871
Total supplied to smelting works	329,354

The gross total of output is therefore 792,194 tons, and in spite of the fact that the fall in exchange caused a good deal of uneasiness to the mining community, the companies have secured good profits, and the dividends paid are much the same as in previous years.

As is usual during the two last months of the year, freights for the Black Sea advanced, causing a falling-off during those months in the shipping at this port, in consequence of which a large stock of ores remained on hand at the end of the year.

CONCESSIONS.

The following is a list of mining concessions granted of late by the Greek Government, comprising in all 205,668 stremma, or about 50,832 acres :—

Province.	District.	Description of Ores.	Area in Stremma 4¼ = acre.
Attica ...	Thorico ...	Manganese iron, silver lead, and zinc ore	138
Attica ...	Athens ...	Lignite coal	12,888
Thessaly	Ferres-Volo	Manganese iron, silver lead, and zinc ore	9,916
Milo ...	Siphno ...	Manganese iron, silver lead, and zinc ore	23,091
Zea ...	Kythno ...	Manganese and hematite iron ore	3,035
Syra ...	Mykono ...	Manganese iron, silver lead, zinc and coppe ore	24,487
Zea ...	Kythno ...	Manganese iron, silver lead, zinc and copper ore	7,843
Syra ...	Ios... ...	Manganese iron	28,735
Carysto	Skyros ...	,, ...	3,196
Carysto	Stoura ...	Manganese iron, silver lead, zinc, and ochre ore	12,082
Spezzia...	Kranidio ...	Iron and copper ore	5,561
Carysto	Cotyleon ...	Lignite coal	3,132
Locris ...	Larimna ...	Iron ore...	896
Naxos ...	Paros ...	Iron and manganese iron ore ...	7,718
Xyrochori	Histrea ...	Magnesite (white stone) ...	710
Epidaurus	Vatica ...	Manganese iron and iron ore ...	26,071
Calamata	Alagonia ...	Silver lead, copper, manganese iron ore	7,878
Santorin	Amorgos ...	Iron and zinc ore	17,999
Phthiotis	Macricomi	Coal	1,665
Corinth	Cleones ...	,, ...	3,211
Bœotia	Chalkis ...	Manganese and hematite iron ore	5,506
		Total	205,668

A survey has been made of the last concession mentioned in the above list, which lies in the Gulf of Eubœa, near Metochi village, and competent mining engineers describe it as the largest mine existing in Greece, the mountains round being supposed to be a mass of hematite ore, which could easily be worked and exported, as there is a safe port near at hand. Soundings have been made at several points, and there are indications that the same strata of ore continue up to Thebes, and new applications for concessions are constantly submitted to the Government.

This mine covers a very large area, but, unfortunately, owing to the presence of a large percentage of silica, the ore will not be marketable unless carefully treated, so as to separate the iron ore from the silica, and to accomplish this it will be necessary to have crushing and washing machinery, the ore being then made up into blocks for export.

NEW PAPER MILL IN THE PIRÆUS.—Another mill is now being built in the Piræus for the manufacture of paper wrappers of all sizes and qualities. The machinery has been ordered from Germany, with the exception of the steam engine of about 100 horse-power and boilers, which are to be constructed in the Piræus.

Official Memoranda.

(From the Board of Trade Journal.)

TARIFF OF THE ARGENTINE REPUBLIC.

The following is an abstract of the Customs regulations of the Argentine Republic for 1899 as regards chemicals :—

25 PER CENT. *ad valorem.*

Borax.
Hides and skins, tanned.

10 PER CENT. *ad valorem.*

White lead.
Ammonia, anhydrous, in cylinders.
Antimony, metallic.
Baryta, pulverised, or impure sulphate of baryta.
Coal tar or pitch.
Pitch, mineral.
Degras.
Lead in sheets.
Sulphate of lime.

5 PER CENT. *ad valorem.*

Wire of iron or steel, galvanised or not, up to No. 14 inclusive.
Wire of iron or steel, barbed, for fences.
Sulphur, of all kinds.
Tin-plate, unwrought, cut or not.
Fire bricks.
Lead in ingots or bars.
Fire clay.
Zinc in ingots or bars.
Tar oils, heavy.
Quicksilver.
Resin-pitch.
Nitrate of potash, crude, for industrial purposes.
Kaolin.
Carbonate of soda, soda ash, industrial silicate, nitrate and impure sulphate of soda, and caustic soda.
Sulphate of aluminium, impure.

2½ PER CENT. *ad valorem.*

Trinidad asphalt.
Sulphur, not purified, for industrial purposes.
Caoutchouc in natural state.
Fibres or wood pulp, for the manufacture of paper.

THE SICILIAN SULPHUR TRADE.

A despatch has been received at the Foreign Office from H.M. Consul at Palermo, containing the following notes on the prospects of the Sicilian sulphur trade during the current year :—

According to the estimates made by the Sicilian Chambers of Commerce the production of sulphur during 1899 will certainly exceed half-a-million tons. All the Sicilian mining districts are vigorously employed increasing the output. The increase is due to the greater demands from the United States owing to the late war; also to demands from Germany, Greece, and France, where sulphur is being used in the treatment of vines. On the other hand, a decrease of about 15,000 tons over the consumption of 1898 is expected from Italy and Russia.

The exports of sulphur to the United States during 1899 are estimated to reach 110,000 tons.

The prospects for 1899 are estimated as follows :—

	Tons.
Stock on hand on December 31st, 1898 ..	248,000
Production during 1899	500,000
Total amount available	748,000
Estimated total exportation during 1899 ..	400,000
Estimated left on hand on December 31st 1899	348,000

It is estimated that the stocks on hand on the 31st December, 1900, will be still greater.

TENDERS FOR SEWAGE PLANT AT BREST.

The Secretary of State for Foreign Affairs has received a despatch from H.M. Consul at Brest, stating that tenders are invited by the Sewage Syndicate of that town for the supply and erection of the necessary plant and machinery for disposing of sewage by converting it into manure.

Such particulars as have been received may be examined on personal application at the Commercial Department of the Foreign Office any day between the hours of 11 a.m. and 5 p.m.

BULGARIAN PROHIBITION OF COTTONSEED OIL.

In a communication to the Foreign Office H.M. Agent and Consul-General at Sofia, reports that the Bulgarian official gazette notifies that the importation of oil of cotton seed, and of edible vegetable oils, mixed with oil of cottonseed, continues to be prohibited. The notification adds that such oils are only admitted to importation when destined for industrial uses, and then only when rendered unfit for food by the addition of petroleum or turpentine at the expense of the importer.

The regulation which requires a sample of every consignment of edible vegetable oil to be forwarded to Sofia for analysis before it is allowed to pass the Customs, gives rise to much complaint. The analysis frequently takes several weeks, during which the importer is not only deprived of his goods, but is compelled to pay warehouse dues upon them to the Custom House.

LORD OVERTOUN AND HIS BICHROME WORKS.

SPEAKING at Glasgow on Monday, Lord Overtoun referred to the publication of certain pamphlets which, he said, for months past had been circulated throughout the country, containing articles by anonymous writers directed against himself, and having special reference to Shawfield Chemical Works—in which he was a partner—and to the condition of the men employed at these works. In response to the suggestion of various Christian workers who were deeply interested in the contemplated evangelistic campaign, and who regarded the charges as an attack directed not merely against himself personally, but also against a movement in which many interests were involved, he took the opportunity of saying, first, that not only was Shawfield, like all other works, under the supervision of the Government Factory Inspector, but, being a bichromate work, such factory inspector was required, in his periodical visits, to see to the observance of additional special rules applicable to all bichromate works, such rules having reference to lavatories, respirators, &c. Further, being under the Alkali Acts, Shawfield was also under the supervision of the Government Alkali Inspector. He had reason to know that the Factory Inspector, whose most recent visits were made last week, was satisfied as to the sanitary and general condition of Shawfield Works, while the Alkali Inspector reported Shawfield as standing high in the list of works as to immunity from gases and fumes. Secondly, as regarded Sunday labour at Shawfield, it had always been a concern to his partner and himself that any Sunday work should be necessary, and their constant aim had been to keep it at a minimum. About three-fourths of the men did not work on Sunday, and no man was obliged to work on that day, nor did any man suffer prejudice by not so working. In the state of their chemical knowledge the carrying on of Sunday work had been a necessity, owing to continuous and complicated chemical processes which went on night and day. Experiments having in view the reduction of Sunday work at Shawfield had been proceeding for years, and the firm were enabled some time ago to diminish considerably such work. As the result of more recent experiments they had arranged to make a trial of stopping the chrome furnaces. The cessation of labour on Sunday at Shawfield was a consummation which he had always had very deeply at heart, and he was hopeful that the successful progress of the experiments might eventually enable this to be practically accomplished. He admitted that, in view of any Sunday work going on at Shawfield, however necessary, he might have made a mistake in agreeing to head a deputation to the Town Council as to the Sunday opening of the People's Palace. Thirdly, the wages and general condition of labour at Shawfield, as well as the treatment of men in case of sickness, accident, and old age, compared favourably with other works. This was borne out, not only by the fact that the majority of the men who came to Shawfield remained—there having been many men in the firm's employ who had served for periods ranging from twenty to fifty years,—but also by the fact that after a strike in February last, though many of the men had found work elsewhere, they almost without exception returned to Shawfield as soon as work was resumed. Strikes rarely had occurred at Shawfield, only four having taken place during the last twenty years. No man was ever dismissed from Shawfield because he belonged to a union or took part in a strike. Regarding the various statements in the pamphlets to which he had referred, there was not a single charge of importance which was not either grossly exaggerated or, as in many cases, absolutely untrue.

Salt in Trieste.—The salt industry of Capodistria, in consequence of a dry summer, yielded very satisfactory results, the salt-pans there producing 99,135 quintals (of 123·2 lbs. avoir. each). Shipments of salt to Brazil continue to increase.

Iodine and the U.S.A.—About two-thirds of the iodine exported *from Chili* goes to the United States. The amount shipped in 1897 *(the latest available statistics) was 242,937* kilos., an increase of 36,542 *kilos. over the figures of 1896. The value is given* as 2,429,370 dols.

Parliamentary Jottings.

BEER MATERIALS.

In the House of Commons last week, Sir C. Quilter (Suffolk, Sudbury) asked the Chancellor of the Exchequer whether, in conformity with the suggestion contained in the majority report and the recommendation contained in the minority report of the Beer Materials Committee, he would direct the Commissioners of Inland Revenue to require brewers for sale to make separate entry, after the close of the present fiscal year, of all substitutes for hops used, describing accurately the nature of such substitutes; and whether he would further direct the Commissioners to alter the form of the published return relating to brewers' licences, so as to disclose the quantities of malt, substitutes for malt, or unmalted grain, and of hops or substitutes for hops used by each individual brewer.

The Chancellor of the Exchequer (Sir M. Hicks Beach).—The majority of the Committee, while they mentioned that hops and hop substitutes might be made the subject of a separate entry, expressed their opinion that no deleterious substitutes were in fact used, and that compulsory declaration of the use of substitutes would serve no useful end. Legislation would be necessary to compel brewers to make such entries, and, in view of the committee's opinion, I have not seen my way to propose it. The suggestion in the second paragraph was also considered by the committee, but the opinion of the majority was that it would involve inquisitorial interference with business, and a departure from that reticence as to individuals, which is an essential feature of our revenue system.

THE ABSENT PETROLEUM BILL.

On Monday Mr. Reckitt (Lincolnshire, Brigg) pointed out that on March 15th the Under-Secretary for the Home Department said that the Government were about to introduce a Bill dealing with petroleum, and that that Bill was in a forward state of preparation. That promise procured the rejection of the Petroleum Bill which he (Mr. Reckitt) had introduced; but the Government had not yet fulfilled the promise. When such a pledge was made it ought to be carried out within a reasonable time. (Cheers.)

Mr. Balfour.—I was not aware that a promise was given to introduce the Petroleum Bill in the course of the present session.

Mr. Reckitt.—Not only was the pledge given at the time the Under-Secretary for the Home Department spoke against the former Bill, but it was promised on more than one occasion in answer to questions in this House.

Mr. Balfour.—I do not throw doubt on the statement of the hon. member, but I should like to see the terms of the promise. If a promise was made to introduce the Bill in the course of the present session, that promise of course will be carried out; but I cannot promise that "reasonable time" for its discussion, which hon. members opposite desire for Irish Bills (See also page 411)

SANTORIN CEMENT.

THERE appears to be a good opening for a considerable trade in the exportation of Santorin volcanic cement (Puzzolana) from Syra, which according to Dr. Michaëlis and Herr Nandor, two eminent engineers and authorities on the use of hydraulic cements, is particularly suitable for masonry structures exposed to the action of the sea and comparing very favourably with Roman cement that has already earned for itself a good name.

As a result of the investigation of these gentlemen they strongly recommend that hydraulic cementing materials containing more lime than is required for the formation of stable hydro-silicate and aluminate may be made suitable for submarine work by an admixture of trass, or puzzolana, thus not only greatly increasing the cementing strength of the mass, but also enabling it to withstand the disintegrating action of the salt water.

To those interested in this subject it is perhaps worthy of note to further state that Dr. Michaelis has announced as the result of examination of many structures immersed in sea-water, that Portland cement of the best quality does not resist the chemical action of sea-water so well as does the less expensive Roman cement or a combination of Portland cement, puzzolana, and granulated blast-furnace slag.

At the time of the construction of the harbour works at Trieste a number of artificial blocks of concrete made with hydraulic lime of Teil were used, and many of these showed insufficient resistance to blows and pressure. Subsequent works being undertaken, it was decided to use the Santorin cement, and the results were good. In the construction of quays and breakwaters at Alexandria this cement is also extensively employed.

A local committee representing a certain capital has been formed at Santorin with a view of promoting this enterprise, and is taking serious steps to obtain foreign financial and engineering aid for the construction of a new harbour and a small railway to convey the puzzolana from the natural beds for shipment from this port.

THE CHEMICAL TRADE OF GHENT.

THE *Chemical* imports of Ghent show a decline of 5,309 tons in 1898, as compared with 1897, for while phosphate rock from Florida exceeded the quantity of the preceding year by 2,660 tons, and nitrate from Peru was about the same. There was a falling-off in sulphates of soda and ammonia, bleaching powder, bichromate, and carbonate of soda, etc. The quantity of nitrate from Chile and Peru imported during 1898 was 9,836 tons, and it is expected that this commerce will develop considerably here when the deepened waterway will admit vessels of greater draught.

The following is an abstract of the chief chemical imports : —

		1898		1897.
Chemicals	tons	33,598	...	38,907
Pyrites	,,	17,530	...	17,754
Rock salt	,,	7,151	...	5,516
Guano	,,	5,372	...	3,649
China clay	,,	4,569	...	4,033
Oil cake	,,	4,010	...	1,014
Petroleum	,,	3,595	...	181
Salt (refined)	,,	2,502	...	1,670

Scoria and Cement. The exports of Scoria, of which 35,715 tons were shipped in 1897, reached 73,229 tons in 1898, and there is every indication of this activity being maintained. The greater part of this goes to the Rhine provinces, where it is utilised in the manufacture of steel by the "Thomas" system It is carried from here by the Rhine boats, *via* the Ghent-Terneuzen canal and the Schelde, which vessels and tonnage are not included in the shipping analysis at the beginning of the present report, as the figures thereof only apply to shipping which has crossed the sea ; although mention is made incidentally of the small craft which reached Ghent from the interior of the country.

Exports of cement, from 14,040 tons in 1897, reached 21,076 in 1898. This industry is very prosperous at Ghent, and all the works during the past year have been occupied without cessation, not only supplying Belgian demands, but successfully competing in foreign markets, by reason of low prices for their "Cement Romain," "Portland Naturel," "Portland Artificial," cement stones, and other objects.

The chief chemical exports were :—

		1898.	1897.
Scoria	tons	73,229	35,715
Phosphates	,,	35,940	35,843
Cement	,,	21,076	14,040
Barytes	,,	3,078	2,729
Matches	,,	1,742	2,568
Sulphate of Soda	,,	1,446	675
White Lead	,,	1,050	825

EXPORTS OF PETROLEUM FROM U.S.A.

THE Chief of the Bureau of Statistics at Washington gives the following returns of the exports of petroleum and petroleum products for April. The total shipments were 66,877,657 gallons, compared with 76,649,229 gallons in 1898. The total for the 10 months ending April, 1899, were 763,138,113 gallons, against 842,669,303 gallons in the same period of 1898. The details of the shipments are as follows:—

			CRUDE PETROLEUM.	Gallons.
Total,	April,	1899	.....	5,404,555
,,	,,	1898	.....	8,741,647
			NAPHTHAS.	
Total,	April,	1899	.....	398,318
,,	,,	1898	.....	1,091,454
			ILLUMINATING.	
Total,	April,	1899	.....	51,906,299
,,	,,	1898	.....	61,284,786
			LUBRICATING AND PARAFFIN.	
Total,	April,	1899	.....	6,361,163
,,	,,	1898	.....	4,571,852
			RESIDUUM.	
Total,	April,	1899	.....	2,807,322
,,	,,	1898	.....	959,490

AFFAIRS OF C. VAUTIN.—The public examination of Claude Vautin, metallurgist, of 66, Old Broad-street, London, and St. John's Wood, on Tuesday, was ordered to stand over until next November. The debtor was arrested at Florence, and is now serving a term of six months' imprisonment, which will then have expired. No accounts have yet been filed under the bankruptcy, but the liabilities have been roughly estimated at £70,000.

Trade Notes.

NEW FORM OF ADULTERATED MILK.—The Canterbury Farmers' Club was made indignant on Saturday last, by the revelations of one of its members. He had, he said, come into possession of a circular from a London firm, pointing out that in view of the warm weather milk was likely to become scarce. The writers therefore called attention to "our extract of milk, which is very largely used at this time of year." The speaker said he had discovered that one well-known firm of Kentish milk purveyors used the article together with hot water and milk, and that it was possible to gain one churn in six and even more by use of the extract, the mixture being sold as pure milk.

ANOTHER SOAP COMPANY—It is stated that a well-known soap enterprise, at present in private hands, will shortly be converted into a joint-stock company. Only the preference shares will be offered to the public.

"A CHANNEL FLEET" is the title of a neatly got-up, nicely-illustrated pamphlet by Percy Lindley on the elegant and fast steamers now running on the Great Eastern Railway's Royal-Mail-Harwich-route. It also deals with some of the pleasant Dutch, Swiss, and Norwegian tourist routes which are thus opened up. It can be obtained from the author, 30, Fleet Street, E.C.

"NOTES FOR TRAVELLERS IN EUROPE."—Under this title Messrs. Pitt & Scott, shipping agents, of 25, Cannon Street, E.C., and elsewhere, have issued a useful "guide to guides" for the waistcoat pocket. There are numerous items of service to experienced travellers between the covers, while to the inexperienced it will be found a valuable companion. It is sent post free on application.

FERRO-CHROME ALLOYS FOR STEEL.—Messrs. Geo. G. Blackwell, Sons & Co., of Liverpool, advise us that they have added to their various "Lion Brand" steel-making alloys a rich ferro-chrome low in carbon. This alloy, which they are now prepared to supply up to one ton a week, contains 68/70% of chromium, 30% of iron, 0·685/1·0% of carbon, and 0·20% silicon. They are still supplying their well-known 60/65% alloy.

SULPHURIC ACID FROM SULPHIDE ORES.—The Whitney Reduction Company has organised and bought the Mack Mackin Mine for £3,400. from the late E. Manney, of Gold Hill. The company propose to develop the mines and erect a complete reduction plant, making sulphuric acid as a by-product. George I. Whitney of Whitney & Stephenson, of Pittsburg, Pa., is president, Col. E. B. C. Hambley vice-president and general manager. The office of the company is Salisbury, N.C., U.S.A.

A NEW YORK TARTAR WORKS.—It is said that the Stauffer Chemical Company of San Francisco has decided to establish a cream tartar factory in New York City. This move is said to be the outcome of the rivalry between it and the American Cream Tartar Company of New York. John Stauffer, the practical superintendent of the Stauffer Chemical Company, with Mr. John H. Wheeler, vice-president, in New York, will have charge of placing the machinery in the new factory, which will have a capacity of 150,000 lbs. per month, that can be increased at a slight expense to double the capacity. European argols will be used in the manufacture of the cream tartar in the East.

INDUSTRY CLUB: PRESENTATION TO MR. SUTTON.—On Monday at Frascati's, a dinner and smoking concert was held, at which was made the occasion for the presentation to Mr. F. Napier Sutton of a handsome chronograph and a stationery case covered with embossed silver for Mrs. Sutton. Mr. T. Tyrer made the presentation, in suitable terms, on behalf of the past chairmen and the members of the club. Mr. Rubeck played very finely one of Listz's fantasias and a ballad of his own composition. The songs and recitations were given by the three gentlemen, Cheesewright, Graham, and Gibbon, who are members of the Savage Club. Dr. Lewkowitsch gave one of his humorous sketches, entitled "How to improve the Industry Club," wherein, taking as an instance, he imagined Dr. Thudicum reading a paper on wines—and sherry in particular—to the members of the society at Burlington House—who were not members of the club—while the lecture was heard by those who were members through the gramophone at the club at the Hotel Previtali, where also the Amontillado sherry was being specially sampled during the lecture. The president of the society, Mr. Beilby, proposed a vote of thanks to the gentlemen who had contributed to the entertainment of the evening, and coupled the vote with the name of Mr. B. E. R. Newlands, who responded by telling three or four exceedingly humorous stories in his own inimitable fashion. There were nearly one hundred members of the club present, including all the past chairmen and vice-chairmen, with Dr. Mond and Dr. Croft, from Boston, U.S.A.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Though there is no material change in the price of benzols, there is greater activity in the market, and 2,000 gallons of 90's have been sold at 6¾d., in consequence of which 50/90's are now quoted 7½d. Carbolic acids are firm, especially crude, which is now worth 2s. 1½d. up to 2s. 2d. Naphthas keep about the same, and for various reasons afford an outlook for the future which is not quite so gloomy as it has been of late. Creosote is steady. Values for anthracene range from 3½d. to 4d. for 30% A, and 2½d. to 3d. for B. Pitch continues to improve, and the change in the weather will tend to assist shipments, quotations being 28s. f.o b. East Coast, and 25s. West.

Sulphate of ammonia is steadier, and prices are again the turn in sellers' favour. Continental inquiry has been more active, and buyers seem disposed to submit more freely to the prices which are now ruling. Nearest values for prompt sales are :—Beckton, £12. 10s. ; London (outside makes), £12. 10s ; Hull, £12. 6s. 3d. to £12. 7s 6d ; and Leith, £12. 7s. 6d. to £12 8s. 9d. Nitrate of soda firm at 8s 3d cwt.

MISCELLANEOUS CHEMICAL MARKET.

The trade in alkalies, generally, is reported good in regard to the volume of business being done, and, though there is no improvement in values, the market is steady. For bleaching powder the export trade continues active and price is firm ; hardwoods at £4. 15s., f.o.b. Liverpool, and for home trade, f.o.r. makers' works, £4. 2s. 6d. per ton. Chlorates are a turn easier if anything, but prices are nominally unchanged, potash at 3½d. and soda, 3¼d. per lb. Caustic soda in all positions is unaltered and nearest spot quotations are as follows, f.o.b. Liverpool :—77%, £7. 12s. 6d. ; 74%, £7. 7s. 6d. ; 70%, £7. ; 60%, £6. per ton. Alkali, 58%, steady at the convention price of £3. 17s. 6d. bags, f.o.r. Soda crystals and bicarbonate are well maintained. Sulphate of copper has fluctuated during the week and closes at £25., f.o.b. Sulphur firm at £4. 12s. 6d per ton, f.o.r. In saltcake there is only little business doing, but more inquiry, and price is reported from 27s. 6d. to 28s. 6d., f.o.r. Borax steady at £16. and £16. 10s. for crystals and powdered respectively. Boracic acid, £27. 10s. per ton Potash, carbonate and caustic, are scarcer and prices higher. Prussiate of potash and soda remain firm at 8d. per lb. and 6¼d. respectively. For aniline oil and salt values are unaltered. Carbolic acid, crystals and liquid, are firm. White powdered arsenic shows a further upward tendency, with sales reported at £19. 5s to £19. 10s. per ton. Green copperas is in better general request and price higher. Brown acetate of lime is steady at £5. to £5. 2s. 6d. for American, ex ship. English makes irregular ; grey, £8. per ton. Acetate of soda firm at £12. 15s. ex ship. Acetic acids are unaltered, 8s. per cwt. for 40% being current value, f.o.r. White sugar of lead is offered freely and price continues to droop. Oxalic acid dull at 3d. per lb. Glycerine is dearer. Tin and zinc salts are firm. For nitrate of soda price is steady at 7s. 10½d. per cwt. for prompt and forward delivery. For chemicals, generally, the demand is only moderate, and prices on the whole remain in buyers' favour.

REPORT ON MANURE MATERIAL.

There is no fresh feature in the market upon which to comment, but prices in all positions are very firm.

There is no change to notice in the quotations for mineral phosphate, shippers having very little to offer for delivery over the next twelve months, and for anything within that period full prices will have to be paid.

In the absence of cargoes of River Plate bones offering, prices are nominal, but something like £5. per ton would probably be taken. East Indian bone meal is very firm, both on spot and for shipment, the quotation being £5. 5s. per ton in both positions.

Nitrate of soda is rather firmer on spot, the closing quotation being 8s. 3d. per cwt. for fine quality.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

OILS.—Palm oil is firm ; during the week Benin has been done at £21. and Old Calabar at £21. 8s. 9d. to £21. 10s. ; Lagos has also been sold at £22. Olive steady, without change in values. Linseed is firm at 22s. to 22s. 6d. cwt. for Liverpool makes in export casks. Cottonseed is unchanged, with a steady market. Castor oil firm, with a moderate demand, at 2⅜d for good seconds Calcutta, and 2¾d. for first pressure French. Tallow is rather brisker. Resin keeps steady in price, but there is not much doing. Spirits of turpentine are moving fairly well at 35s. 9d. cwt. for spot. Petroleum steady, with American 6¼d. to 7½d., and Russian refined, 5⅝d. to 6d.

CAKES.—American Western linseed are rather quieter at £5. 16s. 3d. to £6. 2s. 6d. ; whilst other imported descriptions are slow of sale, with Bombay offering at £6. 12s. 6d. to £6. 17s. 6d. per ton ; River Plate and Russian quotations remain quite nominal. Liverpool makes are not much inquired after, but the range of values is maintained at £7. to £8. per ton. American decorticated cottonseed have met only a moderate demand, but sellers have shown little inclination to force sales, and £5. 12s. 6d. to £6. 2s. 6d., according to quality, is still quoted ; Liverpool makes meet a fair inquiry at £6. 2s. 6d. to £6. 15s. Undecorticated makes of Liverpool brands are still quoted at £4. 17s. 6d. to £5. 7s. 6d , but there is not much trade doing thereat, and Egyptian are nominally quoted at £4. 10s. per ton, a quiet tone ruling thereat.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—The prices remain firm for both linseed and cotton oils ; the present situation of both is more likely to advance than to recede. The exports for the week have been—Linseed oil : Austria, 2 tons ; Belgium, 1 ton ; Germany, 21 tons, Holland, 10 tons ; Norway, 2 tons ; total, 60 tons ; cotton oil : Belgium, 1 ton ; Holland, 60 tons ; Russia, 2 tons ; total, 63 tons. The imports of seed have been—Linseed : 4,210 qrs. for the week, against 19,408 qrs. for same week a year ago, making a total for the year of 231,431 qrs., against 159 658 qrs. a year ago. Rapeseed, 400 qrs. for the week, against 700 qrs., making a total of 66,088 qrs., against 34,625 qrs. Cottonseed, 28 tons, against 2,182 tons for the week, making a total of 85,104 tons, against 107,971 tons. Oilcake, 150 tons, against 12 tons ; total, 10,958 tons, against 8,091 tons. Olive oil, 56 tuns, against 532 tuns for the week ; total, 1,683 tuns, against 3,496 tuns. Linseed oil is firm, and quoted 20s. 3d , naked, spot ; 20s. 1½d. month ; 18s. 9d., July/August ; 18s 3d., September/December ; boiled and refined, £1. to £1. 10s. per ton extra. Refined cotton oil scarce and firm, being quoted 15s. 3d., naked, spot ; 15s. 7½d July/August ; 14s. 3d. November/April. Crude, 14s., casks £1., and barrels £1. 10s. per ton extra. Turpentine, 35s. 6d. to 36s. Olive oil unchanged. Olive oil soap, £15. 10s. to £17. 10s. per ton, to arrive ex-wharf. Castor oil, extracted here : cold drawn, 29s. 6d. per cwt. in barrels ; 3⅜d. per lb. in cases ; first pressure, 27s. 6d. per cwt. in barrels, in cases 3⅛d. per lb. ; second pressure, 25s. 9d. per cwt. in barrels. Oleines, £18. 10s. to £21. per ton c.i.f. Hull. Resins, 4s. 4½d. for B/C grades to 8s 3d. for W/W. Cod oil, £16. to £18. per ton.

CAKES.—Linseed cakes very firm ; 95 per cent. pure, £6. 15s. to £6. 17s. 6d. Oilcake (linseed), £5. 17s. 6d. to £6. per ton Russian, £6. 10s. to £6 17s. 6d. Cotton cakes steady, best makes £5. 2s. 6d. to £5. 3s. 9d. ; seconds, £4 17s 6d. to £4. 18s. 9d. decorticated, £6 7s 6d. ; meal, £5. 15s. to £5. 17s. 6d. Rape cakes dearer, Black Sea, £4. 17s. 6d., in short supply.

PAINTS.—The market is steady at usual prices, disinfectants finding a good market.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

Sulphate of ammonia has continued slightly towards the losing side but after all it has not lost much over the week as a whole. Prompt f.o.b. Leith goes at about £12. 7s. 6d. to-day, and buyers are pretty free in their orders at that, as though doubtful of any further considerable descent. There is nothing doing on the basis of forward delivery. Sulphate of copper has given way slightly in second hands, and there have been some sales at £25. 10s. General chemicals have been fairly steady, and business in over-sea orders has been pretty fair. Bleaching powder and soda crystals are both in good inquiry. Mineral oils and paraffins all as before, and in fair movement, except for burning oils, which at present are confined to stocking by the makers.

Chief prices current are :—Soda crystals, £2. 5s. to £2. 7s. 6d. basis nett, Tyne ; soda ash, £4. 2s. 6d. to £4. 15s. nett, Tyne ; white alkali, £5. to £5. 10s. nett, Tyne ; alum in lump, £4. 5s. to £4. 15s. nett, Glasgow ; caustic soda, white, 74° £7. 7s. 6d., 70/72° £7., 60/62° £6., and cream 60/62° £6., all nett, Liverpool ; bleaching powder, 35/37°, £5. 10s. to £5. 12s. 6d. nett, Tyne ; saltcake, 26/6 ; borax, English refined, £16., and boracic acid, £25. nett, Glasgow ; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks, £6. 15s., nett, Liverpool ; bichromate of potash, 3¼d., less 6½% for Scotch and English deliveries (for export, 3d. nett, f.o.b. Glasgow) ; bichromate of soda, 2½d., less 6½% for Scotch and English deliveries (for export, 2¼d. nett, f.o.b. Glasgow) ; chlorate of potash, 3⅝d., less 5% Liverpool ; nitrate of soda, 8s. 3d. ; sulphate of ammonia, £12. 7s. 6d. prompt, f.o.b. Leith ; salammoniac, first and second white, £35. and £33. nett, any port ; sulphate of copper, £25. 10s., less 5% Liverpool ; paraffin scale, hard, 1⅞d. to 2d. per lb., and soft 2d. per lb. ; paraffin wax, 120° semi-refined, 2¼d. to 2½d. per lb. ; paraffin spirit (naphtha), 9d. to 9½d. per gal. ; paraffin oil (burning), No. 1, 6¼d. ; and crystal, 6¾d., at Glasgow and other big centres, for Scotch buyers, English sales a shade

lower; ditto (lubricating) 865° £4. 15s. to £5. 5s., 885° £5. 10s. to £6., and 890/895° £6. 5s. to £6. 10s. Week's imports of sugar at Greenock were 54,977 bags cane jaggery, and 637 casks beet, unrefined.

TYNE CHEMICAL REPORT.

TUESDAY.

Chemicals are quiet, and very little new business doing. A large number of the various manufactories on the river are closed this week owing to local holidays. Soda crystals are steady at £2. 12s. 6d. per ton, gross weight, locally. Caustic, 70%, £7., and 76/77%, £8. per ton, f.o.b. Tyne. Sulphur, £4. 15s. per ton.

Bleaching powder, softs, £5. 5s. per ton, nett; do., hards, £5. 10s. per ton, nett; caustic soda: 76/77% £8., and 70% £7. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 2s. 6d. per ton, nett; do., 52%, £4. 5s. per ton, nett; alkali, 36%, £3. 12s. 6d. per ton, nett; white alkali, 48%, £5. per ton, nett; do., 50%, £5. 5s. per ton, nett; do., 52%, £5. 10s. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do, 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75°Tw., £2. 12s. 6d. per ton, nett; do., 100°Tw., £3. per ton, nett; do., 140°Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2 12s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 12s. 6d. per ton, nett weight; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 10s. od. per ton, nett; blanc fixe, £6. 10s. per ton nett; chloride of barium, refined crystals, £6. 15s. od. per ton, nett; do., crude calcined, £6. 5s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt is firm at 9s. 6d. per ton, f.o.b. Tees.

COALS.—The coal trade is brisk, and prices are firm generally, there being a very full demand. In coke the tendency is strong. Best Durham is 25s. per ton, f.o.b. Best Northumbrian steam, 12s. 3d. to 12s. 6d. per ton; second qualities, 11s. 3d. to 11s. 6d. per ton; small steam, 5s. 6d. to 6s. per ton; bunker coals, 9s. 9d. to 10s. per ton; household coals, 10s. to 11s. per ton; coke, 25s. to 26s. per ton.

New Companies.

Low Moor Chemical Co., Ltd.—CAPITAL £1,000. in £1. shares. This company has been formed to acquire the goodwill and trade marks of the business of James and M. S. Sharp & Co., Ltd., and to carry on the same as a branch of the Bradford Dyers' Association, Ltd., who are the controllers of the company.

Cornwall Ochre Mines, Ltd.—CAPITAL £20,000. in £1. shares (5,000 pref. and 100 def). This company has been formed to acquire the business of the St. Goran's Mines Co., Ltd., and to carry on the business of miners and manufacturers of and dealers in ochres and other minerals, colours, chemicals, and drugs. The subscribers to the memorandum of association are:—W. F. Todd, 21, Brandon-street, Gravesend, clerk; H. A. Sayer, 49, Wool Exchange, E.C., solicitor; C. G. Dudin, 2, Clement's Inn, W.C, clerk; H. E. Newson, 2, Clement's Inn, W.C., accountant; A. E. Wilding, 2, Clement's Inn, W.C., clerk; S. Enever, 12, Gower-road, Forest Gate, accountant; G. E. Austin, 6, Endymion-road, Brixton Hill, clerk.

James Fison & Sons, Ltd.—CAPITAL £60,000. in £10. shares (2,200 pref.). This company has been formed to acquire and carry on the business of maltsters and manufacturers of and dealers in vitriol and chemical manures, carried on as "James Fison & Sons," at Thetford, Dereham, and King's Lynn, Norfolk, and elsewhere. The subscribers to the memorandum of association are:—W. C. Fison, Ford Place, Thetford, Norfolk, merchant; C. F. Fison, South Nutfield, Surrey, clerk; J. Fison, Red House, Thetford, Norfolk, merchant; G. H. Fison, Ashburton-road, Southsea, gentleman; E. T. Fison, Manor-road, Salisbury, M D.; H. F. Killick, King's House, Thetford, gentleman; H. Webb, 45, Bury-road, Thetford, clerk. Registered office, Bridge-street, Thetford, Norfolk.

Saghalin and Amour Petroleum and Mining Syndicate, Ltd.—CAPITAL £100,000 in £1. shares. This company has been formed to search for, prospect, examine and explore in the Island of Saghalin, and in the East Coast of Siberia or elsewhere, ground supposed to contain naphtha, petroleum and other oils, minerals, etc., and to carry on the business of mining, smelting and refining company. The subscribers to the memorandum of association are:—W. L. Nicholas, 19, Ridgmount Gardens, W.C., gentleman; A. W. Parsons, 58, Pemberton Gardens, Highgate, clerk; A. B. Birnbaum, 14, Kingden-road, W. Hampstead, N.W., gentleman; R. Boulton, 19, Throgmorton Avenue, E.C., clerk; R. W. Goode, 215, Tufnell Park-road, N., gentleman; L. Halliday, 52, Rectory Grove, Clapham, S.W., secretary; A. W Briggs, 26, Gt. St. Helens, E.C., secretary.

William Carter and Sons, Ltd.—CAPITAL £15,000. in £10. shares. This company has been formed to acquire and carry on the business of painters, paint, colour and varnish manufacturers, etc., now carried on as William Carter, and to adopt an agreement with W. Carter, J. Carter, and F. E. Carter. The subscribers to the memorandum of association are:—W. Carter, 14, Esplanade, West Sunderland, paint manufacturer; Mrs. F. E. Carter, Esplanade, West Sunderland; J. W. Carter, 14, Esplanade, West Sunderland, paint manufacturer; F. E. Carter, 14, Esplanade, West Sunderland, paint manufacturer; G. H. Carter, 14, Esplanade, West Sunderland, paint manufacturer; Mrs. M. Burns, Glenburn, Coventry; A. E. Usher, 28, West Sunniside, Sunderland, chartered accountant. Registered office, Avon-street, Sunderland.

Gazette Notices.

PARTNERSHIPS DISSOLVED.

H. HODGE and C. H. DIBB seed crushers and oil refiners, Hull, under the style of Hodge and Dibb.

C. F. FISON and W. C. FISON (as trustees and exors. under the will of Cornell H. Fison, deceased), W. PECHEY, and W. C. FISON individually and J. FISON, carrying on the business of maltsters, chemical and manure manufacturers, at Thetford, Lynn, Dereham, and elsewhere, under the style of James Fison and Sons, so far as regards W. Pechey.

IMPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.

Week ending June 10th.

Acetic Acid—

Holland,	20 pks. £21	A. & M. Zimmermann
Germany,	17 pks.	Argo S. S. Co.
Holland,	50	R. W. Greeff & Co.

Acetone—

France	20 pks.	E. Catlin
Germany,	10	Petri Bros.
,,	10	J. Norrenburg & Co.
,,	1	T. H. Lee

Alkali—

France,	12 t.	J. Harrison
Germany,	1	J. M. Steel & Co.

Alumina Sulphite—

Holland,	£45	W. C. Dickens

Ammonium Bromide—

Germany,	6 pks. £100	R. W. Greeff & Co.

Ammonium Sulphate—

France,	£50	Darling Brs.

Antimony Ore—

Italy,	12 t.	Novelli & Co.

Arsenic—

Germany,	£50	P. Jantzen

Barium Sulphate—

Germany,	93 pks.	J. L. Lyon & Co.
Belgium,	152 t.	,,
,,	139	O' Hara & Hoar

Barytes—

Germany,	57 pks.	W. Harrison & Co.
,,	101	Craven & Co.
,,	58	J. L. Lyon & Co.
Belgium,	77	,,
,,	341	W. Harrison & Co.
Holland,	29	O'Hara & Hoar
,,	19	P. Jantzen
,,	7	R. W. Greeff & Co.
,,	161	W. Harrison & Co.
Germany,	£140	H. Lambert

Basic Slag—

Belgium,	200 t.	Anglo-Continental Guano Works

Bleaching Powder—

France,	52 pks.	J. M. Steel & Co.
Holland,	40	,,

Caoutchouc—

Zanzibar,	60 c.	Hale & Son
France,	24	Procter Brs.
P. E. Africa,	1	Clarke & Smith
,,	45	L. & I. D. Jt. Co.
Straits,	199	,,
France,	29	,,
E. Indies,	34	,,
Zanzibar,	84	,,
Germany,	7	,,
,,	10	Butler's Wf., Ld.
,,	13	Prop. Bull Wf.
Belgium,	157	,,
France,	97	,,
,,	18	Major & Field
E. Indies,	7	H. Devitt & Co.
Germany,	6	Wallace Bros.
Madagascar,	5	Wainwright Brs. & Co.
E. Indies,	12	Butler's Wf., Ld.
France,	27	Chamberlain's Wf., Ld.
Straits,	129	W. Pope & Co.
Germany,	40	J. Barber & Co.
Straits,	41	Butler's Wf., Ld.
,,	236	E. Boustead & Co.
,,	80	Anderson, Weber & Smith
U. States,	14	S. Figgis & Co.

Castor Oil—

Belgium,	40 brls.	Humphrey & Co.
France,	5 cs.	C. Tennant, Sons & Co.
E. Indies,	16 cks.	J. Owen
,,	134	Cayzer, Irvine & Co.
France,	10 pks.	L. & I. D. Jt. Co.
Belgium,	98 brls.	C. & E. Morton
Italy,	20	A. M. Serena & Co.
,,	10	A. & M. Zimmermann

Caustic Potash—

Germany,	30 pks.	J. M. Steel & Co.
,,	5	Vinolia Co.
France,	41	Price's Patent Candle Co.

Chemicals *(otherwise undescribed)*

France,	£5	Royal Niger Co.
,,	17	Chamberlain's Wf., Ld.
,,	316	J. W. Cook & Co., Ld.
Belgium,	15	John Cockerill Line
Belgium,	223	T. Palmer
,,	15	T. H. Lee
Holland,	16	G. S. N. Co.
Sweden,	20	A. G. Barker
Germany,	65	L. & I. D. Jt. Co.
,,	10	W. T. Crook
,,	10	A. & M. Zimmermann
,,	39	H. Lambert
,,	9	Argo S. S. Co.
U. States,	430	B. & F. Wf. Co., Ld.
,,	1,002	H. Harkness
Holland,	23	T. H. Lee
,,	16	Phillipps & Graves
Germany,	10	Fuerst Brs.
,,	32	Butler's Wf., Ld.

Citrate of Lime—

Italy,	136 pks.	Thames S. T. & L. Co., Ld.

Italy 24 Fellows, Morton & Co., Ld.

Coal Products—
Pitch
France, 213 cks. Poth, Hille & Co.
N. Russia, 500 brls. Fellows, Morton & Co., Ld.
,, 225 Batson & Son
Tar
N. Russia, 110 brls. W. Beard & Sons
,, 23 Linck, Moeller & Co.
,, 265 F. & S. Chiesman & Co.

Colours—
Germany, 31 pks. W. Harrison & Co.

Copper Sulphate—
Germany, 18 pks. Charles & Fox

Cream of Tartar—
France, 6 pks. C. Atkins & Nisbet
,, 3 J. W. Cook & Co.,
,, 5 M. Ashby, Ld.
,, 20 J. & T. Bayley
,, 20 W. C. Bacon & Co.
,, 22 F. C. Devon & Co.
,, 20 B. & F. Wf. Co., Ld.

Dyestuffs—
Alizarine
Holland, 1 pk. G. S. N. Co.
Argols
Italy, 140 pks. Thames S. T. & L. Co., Ld.
,, 2,109 B. Jacob & Sons
Cape, 30 Findlay, Durham & Co.
Coal Tar Dyes
Holland, 56 pks. M. Benscher
Cutch
Rangoon, 200 pks. L. & I. D. Jt. Co.
Straits, 37 Borneo Co.
Extracts
Germany, 41 pks. Millers' Tanning Extract Co.
,, 203 Argo S. S. Co.
Belgium, 15 Leach & Co.
Canada, 140 Boutcher, Mortimore & Co.
,, 80 Furness Withy & Co.
U. States, 30 W. C. Barnes
France, 95 B. & F. Wf. Co., Ld.
U. States, 100 Skilbeck Brs.
Gambier
Straits, 273 pks J. W. Cook & Co., Ld.
,, 1,024 Beresford & Co.
,, 1,399 Brinkmann & Co.
,, 256 Adamson, Gilfillan & Co.
,, 523 Prop. Hay's Wf.
,, 968 P. & O. Co.
Indigo
E. Indies, 21 chts. Schonlank, Engel & Co.
,, 4 J. Owen
,, 59 J. W. Cook & Co., 1 bx. Ld.
,, 19 Croysdale & Co.
,, 4 Kaltenbach & Schmidtz
,, 3 Parsons & Keith
,, 54 Wallace Bros
,, 35 L. & I. D. Jt. Co.
,, 9 Stutz & Co.
Myrabolams
E. Indies, 2,000 pkg. Sollar & Sons
,, 1,353 H. J. Perlbach & Co
,, 620 L. & I. D. Jt. Co.
,, 2,000 P. & O. Co
,, 1,848 J. Graves
Saffron
Spain, 2 pks. J. Knill & Co.
E. Indies, 1 C. Brumlen & Co.
Shumac
Italy, 1,775 pks. J. Kitchen, Ld.
,, 140 A. Hartrodt
,, 370 J. W. Cook & Co., Ld.
Tanners' Bark
Natal, 100 t. A. & W. Nesbitt
,, 50 Leach & Co.
,, 134 Flack, Chandler & Co.
,, 68 Bullard, King & Co.
,, 57 Boutcher, Mortimore & Co.
Cape, 32 Union L. Co., Ld.
Tasmania, 80 Prop. Hay's Wf.
Turmeric
E. Indies, 158 pks. Hale & Son

Dyestuffs (*otherwise undes.*)—
Holland, 32 pks. M. Benscher

Farina—
Holland, 50 pks. H. Lorenz
,, 209 R. Bennett & Co.
Germany, 200 ,,
U. States, 400 Taylor Brs.
Holland, 100 *Ohlenschlager Brs.*
Italy, 3 *L. Terroni*

Fossil Meal—
Germany, 30 t. Perkins & Homer

Glucose—
U. States, 4,590 pks. 7,140 c. R. G. Hall & Co.
,, 70 250 L. & I. D. Jt. Co.
,, 100 583 J. Keiller & Co., Ld.
France, 300 300 Perkins & Homer
,, 200 200 Trier, Meyer & Co.
U. States, 1,000 1,000 Fellows, Morton & Co.

Glue—
Germany £150 Davies & Sons
Holland, 300 T. H. Lee
Germany, 140 Butler's Wf., Ld.
France, 72 Mory & Co.
,, 215 Burnett Brs. & Sons
Belgium, 30 Leach & Co.
France, 475 T. M. Duche & Sons
Germany, 96 L. & I. D. Jt. Co.
,, 140 J. Greig
Holland, 12 Phillipps & Graves
,, 47 G. S. N. Co.
France, 50 C. & N. Nicholls
U. States, 233 Armour & Co.
Holland, 55 A. G. Robinson & Co.
Belgium, 1,730 G. E. Banes
Germany, 500 Deering & Robottom
France 12 Bennett S. S. Co.

Glycerine—
Germany, £100 R. W. Greeff & Co.
France, 350 Soundy & Sons
Holland. 400 J. Barber & Co.

Gutta Percha—
Straits, 20 c. Borneo Co.
Venezuela, 226 L. & I. D. Jt. Co.
Straits, 1,000 Prop. Bull Wf.
,, 557 Gilman Brs. & Co.
,, 102 Huttenbach & Co.
,, 600 H. W. Jewesbury & Co.

Iron Oxide—
Germany, 2 t. H. Lambert

Lead Acetate—
Germany, 10 pks. R. W. Greeff & Co.
,, 32 pks. 7 cks. F. Boehm

Lysol—
Germany, £28 A. & M. Zimmermann

Manure—
Germany, 50 t. F. W. Berk & Co., Ld.
E. Indies, 300 t. T. & R. Roy & Co.

Methyl Alcohol—
Holland, 1,050 g. Lister & Biggs
France, 1,461 E. Catlin
U. States, 5,521 H. Wallace & Co.

Molasses—
U. States, 500 pks. 2,862 c. J. Forsey
,, 150 840 Ohlenschlager Brs.
W. Indies, 202 1,800 Falkenburg & Hesse
Egypt, 2,120 t. J. R. Francis & Co.

Ochre—
France, 284 pks. W. Harrison & Co.
,, 20 J. Flack
,, 76 Taylor Brs.
,, 4 O'Hara & Hoar
Holland, 8 Phillipps & Graves
Spain, 165 t. J. L. Lyon & Co.

Oxalate—
Belgium, £40 J. Harrison

Oxalic Acid—
Holland, 10 pks. R. W. Greeff & Co.

Paraffin Wax—
U. States, 400 cs. Anglo-American Oil Co.

Phosphates—
Belgium, 190 t. Odams Chemical Manure Co.
France, 270 West & Penrose
,, 480 E. Catlin
Holland, 163 West & Penrose

Potash—
Belgium, 5 pks. T. H. Lee
Germany, 203 Perkins & Homer

Potassium Bicarbonate—
Holland, £40 A. & M. Zimmermann

Potassium Bromide—
Germany, 16 pks. G. S. N. Co.
,, 30 Lon. & Til. Ltge. C. & D. Co.

Potassium Carbonate—
Germany, 15 t. 5 c. J. M. Steel & Co.
,, 2 H. Lambert
Belgium, 24 5 J. Harrison
France, 6 J. M. Reid

Potassium Chlorate—
Belgium, 20 pks. E. Allen

Potassium Muriate—
Germany, 500 pks. F. W. Berk & Co., Ld.
,, 500 Perkins & Homer
,, 602 Bessler, Waechter, & Co.

Potassium Permanganate—
Germany, 44 pks. R. W. Greeff & Co.

Potassium Phosphate
Germany, 3 pks Butler's Wf., Ld.

Potassium Prussiate—
France, 14 pks. J. Owen

Potassium Silicate—
Holland, 35 pks. J. Barber & Co.

Potassium Sulphate—
Germany, 500 pks. F. W. Berk & Co., Ld.
,, 100 A. Zumbeck & Co.

Pyrites—
Spain, 2,000 t. C. Tennant, Sons, & Co.
,, 7,376 Anderson, Anderson & Co.

Pyrogallic Acid—
Germany, 1 pk. L. & I. D. Jt Co.

Red Lead—
Holland, £96 Randall Brs.
Germany, ,, J. Barber & Co.
,, 8 Fleming's Oil & Chemical Co.
,, 14 pks. H. Lambert
,, 8 t. ,,

Rosin—
France, 25 brls. Poth, Hille & Co.
U. States, 600 F. & S. Chiesman & Co.

Salicylic Acid—
Germany, 30 pks. Butler's Wf., Ld

Saltpetre—
E. Indies, 540 bgs. Lucas & Spencer's Wf.
Germany, 80 cks P. Hecker & Co.
,, 160 pks. ,,

Silver Nitrate—
Germany, 2 pks. R. W. Greeff & Co.

Soda—
Germany, 25 pks. J. Owen
Holland, 10 t. R. W. Greeff & Co

Sodium Hypochlorite—
Germany, 8 t. H. Lambert

Starch—
Holland, 40 pks. Hernu, Peron, & Co.
,, 40 A. G. Robinson & Co.
,, 25 Phillipps & Graves
,, 104 Pearce, Duff, & Co.
,, 3,414 Little & Johnston
U. States, 584 Pickford & Co.
,, 123 Beck & Pollitzer
,, 200 Ohlenschlager Brs.
Belgium, 300 E. & T. Pink
,, 349 T. H. Lee
,, 132 Leach & Co
,, 400 Becker & Wagner
,, 40 Taylor Brs.
,, 290 T. Ronaldson & Co.
Germany, 117 Argo S. S. Co.
,, 6 Butler's Wf., Ld.
,, 1,970 Horne & Co.
,, 390 Seaward Brs., Ld.
France, 380 W. E. Cole

Stearine—
Holland, 254 bls. Hore & Scrivener
,, 51 J. Owen
,, 136 bgs. H. Hill & Sons
France, 60 ,,
Belgium, 94 ,,
,, 3 cks. T. H. Lee
U. States, 300 Fairclough, Dodd, & Sons
Germany, 10 cs. L. & I. D. Jt. Co.

Sulphur—
Italy, 200 t. A. F. White & Co.
,, 25 Deering & Robottom
Belgium, 2 Sawer, Sons, & Co.

Sulphuric Acid—
Germany, 1 pk. L. & I. D. Jt Co.

Superphosphates—
Belgium, 10 t. G. M. Bauer

Tallow—
France, 129 bgs. H. Hill & Sons
U. States, 100 trcs. C. S. Lovell
,, 480 cks. ,,
,, 112 Phillipps & Graves
,, 10 Armour & Co.
,, 500 Cuthbert & Hall
,, 250 Beresford & Co.
Queensland, 21 Mordaunt Brs.
Germany, 5 T. Oertell
N. Zealand, 75 Flack, Chandler, & Co.
,, 75 Phillipps & Graves
,, 6 N. M. & A. Co.
,, 106 J. Grove
,, 13 J. Greig
,, 100 J. Owen
,, 103 Goad, Rigg, & Co.
,, 200 H. Lambert
,, 93 J. Groves
,, 351 Col., Con., & Dist. Co.
,, 146 N. Z. L. & M. A. Co.
,, 150 J. W. Cook & Co., Ld
,, 30 Brown & Elmslie
,, 100 Thames S. T. & L. Co., Ld.

Tartar—
Italy, 43 pks. B. Jacob & Sons

Tartaric Acid—
France, 8 pks. B. & F. Wf. Co., Ld.
Holland, 1 ,,
,, 10 Kirkpatrick Barr, & Co.

Ultramarine—
Holland 14 pks Phillipps & Graves
,, 4 G. S. N. Co.
,, 4 Becker & Wagner
Germany, 53 J. Kitchin, Ld.
,, 40 Steinhoff, Sons, & Co.
Belgium, 4 W. Harrison & Co.

Varnish—
Germany, 10 pks. Butler's Wf., Ld.

White Lead—
Holland, 66 pks M. Ashby, Ld.
,, 30 Kerestedji & Co.
,, 51 F. G. Clifford
,, 49 J. W. Cook & Co., Ld.
,, 3 G. S. N. Co.
,, 3 t. ,,
Germany, 23 Wilkinson, Heywood & Co.
,, 12 pks. Taylor Brs.
,, 27 Purrell & Co.
,, 4 H. Lambert
,, 4 F. & L. Sizler
,, 4 Pinchin, Johnson, & Co.
Belgium, 18 T. & W. Farmiloe, Ld.

Wolfram Ore—
Australia, 2 t. H. Bath & Son
,, 9 H. Grey, junr.
Queensland, 2 11 c. L. & I. D. Jt. Co.

Wood Pulp—
Norway, 1,030 pks. Johnsen & Jorgensen
,, 500 A. E. Reed & Co.
,, 500 W. E. Bott & Co.
,, 250 G. Hagborg & Co.
,, 160 Henderson, Craig, & Co.
Canada, 1,799 Furness, Withy, & Co.
Sweden, 320 Alsing & Co., Ld.
,, 300 G. Hagborg & Co.
,, 250 H. Raby & Mather
,, 16 Beck & Pollitzer
Holland, 254 Netherlands S. B. Co.
,, 52 Phillipps & Graves
,, 57 Becker & Wagner
U. States, 3,030 Henderson, Craig, & Co.
,, 360 W. G. Taylor & Co.
,, 328 Becker & Co.
,, 285 A. E. Reed & Co.
Germany, 10 Butler's Wf., Ld.
,, 400 H. Lambert
,, 40 Becker & Wagner
Belgium, 1,028 J. Harrison

Zinc Oxide—
Germany, 36 pks. R. W. Greeff & Co.
,, 500 t. Soundy & Son.

Zinc Sulphide—
Germany, 16 pks. Beresford & Co.

LIVERPOOL.

Week ending June 8th.

Acetic Acid—
Antwerp, 17 crbys.

Ammonia—
Antwerp, 2 dms.

Barytes—
Antwerp, 169 cks.
Hamburg, 11
Rotterdam, 18 / 50 bgs.

Bone Meal—
B. Ayres, 341 bgs. V. Picasso & Co.

Karachi, 900

Bones—
Rabah, 180 t. W. Graham & Co.

Caoutchouc—
Hamburg, 4 cks.

Castor Oil—
Calcutta, 196 cs. Ralli Brs
" 100 H. Rook & Son
" 500
Marseilles, { 28 cks. 388 brls.

Chemicals *(otherwise undescribed)*
Rotterdam, 1 cs.

Chrome Ore—
Derendjeh, 500 t.

Colours—
Antwerp, 7 cks.
Rotterdam, 7

Cottonseed Oil—
Baltimore, 1,000 brls.
New York, 12

Dyestuffs—
Cochineal
Gd. Canary, 9 bgs. Canary Islands Trading Co.
Cutch
Singapore, 969 bxs.
Extract
Marseilles, 200 cks.
Philadelphia, 15 brls.
Rouen, 181 cks.
Fustic
Kingston 7 t.
Gambier
Singapore, { 1,618 bls. 407 bgs.
Myrabolams
Bombay, 2,993 bgs.
Saffron
Valencia, 1 cs.

Farina—
Havre, 100 bgs. Cunard S.S Co.

Glucose—
Baltimore, 300 brls.

Glue—
Hamburg, { 12 cks. 4 cs.
Rotterdam, 140 bgs.
Rouen. 16 cks.

Gutta Percha—
W.C. Africa, 105 bgs. Royal Niger Co.

Linseed Oil—
Hamburg, 3 brls.

Mica (Pulp)—
New York, 8 brls.

Ochre—
Marseilles, 113 brls.
Rouen, 20 cks.

Paint—
Boston, 13 cs. Metzler & Co.
" 8 brls.
Hamburg, { 4 cks. 10 cs. 30 dms.
Marseilles, 23 cs. G. H. Fletcher & Co.

Paraffin Wax—
Baltimore, 200 brls.
Philadelphia, 200 cs. Anglo-American Oil Co.

Phosphates—
Baltimore, qty.
Coosau, 2,425 t. Central Phosphate Co.

Potash—
New York, 25 cks.
Rouen, 51

Potassium Prussiate—
Bordeaux, 12 cks.

Pyrites—
Huelva, 5,327 t. Mathieson & Co.

Red Lead—
Hamburg, 1 ck.
Rotterdam, 23

Salt—
Christiania, 1 bg. G. Hamlett & Sons

Saltpetre—
Calcutta, 380 bgs. Ralli Brs.
Hamburg, 20 kgs.

Soap—
Boston, 30 cs. Boots' Pure Drug Co.
Marseilles, 17 cs.
New York, 2,000 bxs. Lever Brs., Ld.
" 1 Elder, Dempster & Co.

Newport News, 200
Philadelphia, 2,000 Lever Brs., Ld.
" 7 cs. G. Mosser

Soap Lyes—
Marseilles, { 20 cks. 34 dms.

Soap Stock—
N. Orleans, 1,443 brls.

Starch—
Antwerp, 74 cs. J. T. Fletcher & Co.
" 482
Hamburg, 170
Newport News, 125 brls. J. Howard & Co.
Rotterdam, 90 cs. Brown, Geveke & Co.

Stearine—
Marseilles, 23 cs.
Rouen, 50 bgs.

Sulphur—
Huelva, 1,786 t. Matheson & Co

Sulphuric Acid—
Antwerp, 4 cyldrs

Tallow—
Baltimore, 1,440 tcs
Boston, 500
" 65 Cuthbert & Hall
New York, 250 hds. M. M Schultz & Co.
" 482 1,008 tcs
Philadelphia, 84 tcs. F. Rafferty
" 354 46 brls.

Tanners' Extract—
New York, 25 brls. McArthur
50 bxs. & Co

Tartaric Acid—
Marseilles, 20 cks.

Ultramarine—
Rotterdam 20 cks.

Varnish—
New York 1 cs. 16 brls. W. A. Warren
Philadelphia, 1 bx.

Waste Salt—
Hamburg, 250 t.

White Lead—
Rotterdam, 44 cks.

Wood Pulp—
Drammen, 46 cs. L. S. Dixon & Co.
Gothenburg, 5 pks G. Schkneenwald & Co.
" 30 bls. B. Behrend & Co.
Hamburg, 800 bdls.
New York, 331

Zinc Oxide—
Rotterdam, 20 brls.

MANCHESTER.

Week ending June 10th.

Alumina Sulphate—
Rotterdam, 14 cks.

Antimony Salt—
Hamburg, 10 cks.
Rotterdam, 6

Barytes—
Antwerp, 270 bgs.
Hamburg, 11 cks.
Rotterdam, 12

Coal Products—
Alizarine
Rotterdam, { 6 kgs. 72 cks. 3 cs.
Aniline Oil
Rotterdam 4 cks

Colours—
Antwerp, 13 pks. J. T. Fletcher & Co.
Ghent, 6 cs.
Hamburg, 5 cks. 1
Rotterdam, { 97 33 13 brls. 2 bxs.

Dyestuffs—
Indigo
Rotterdam, 6 cks. 3 chts.

Farina—
Rotterdam, 500 bgs. N. W. Jackson
Stettin, 2,960 Browne, Geveke & Co.
" 1,550

Glucose—
Stettin, 1,000 bgs.

Glue—
Antwerp, 34 bls.
Hamburg, 25 bgs.
Rotterdam, { 5 cks. 5 cs. 20 bgs.
Stettin, 30

Lead Acetate—
Hamburg, 6 cks.
Stettin, 56

Molasses—
N. Orleans, 250 brls.

Potash—
Hamburg, 20 dms.
Rotterdam. 9

Pulp of Barytes—
Rotterdam, 12 cks.

Pyrites—
Huelva, 2,339 t.

Red Lead—
Rotterdam, 8 cks.

Soap—
Hamburg, 1 cs.

Starch—
Antwerp, 40 cs. J. T. Fletcher & Co.
" 40
Rotterdam, 100

Stearine—
Antwerp, 63 bgs.

Tannin—
Hamburg, 1 ck.

Tartar—
Rotterdam, 4 cks.

Tartaric Acid—
Rotterdam, 4 cks.

Ultramarine—
Hamburg, 2 cks.

Waste Salt—
Hamburg, qty.

White Lead—
Rotterdam, 5 cks.

Wood Pulp—
Christiania, 80 bls.
Drammen, 3,662
Hamburg, 680 pks.
Quebec, 2,880
Skien, 1,500

Zinc Oxide—
Antwerp, 10 cks.

Zinc White—
Stettin, 4 cks.

HULL.

Week ending June 10th.

Acids—
Rotterdam, 4 cks. Hull & Netherlands S. S. Co.

Alumina Sulphate—
Ghent, 50 bgs. Wilson, Sons, & Co., Ld.

Barytes—
Antwerp, 535 pks. Bailey & Leetham, Ld.
Bremen, 45 cks.

Chemicals *(otherwise undescribed)*
Antwerp, 66 pks. Wilson, Sons, & Co., Ld.

Coal Products—
Alizarine
Rotterdam, 20 cks. Hull & Nether-
4 brls. lands S. S. Co.
Tar
Konigsberg, 150 cks.
Rotterdam, 3 brls. Hull & Netherlands S. S. Co

Colours—
Antwerp, 2 cks. Blundell, Spence, & Co
" 11 pks. Wilson, Sons, & Co., Ld.
Bremen, 16 cks.
Ghent, 16
Hamburg, 18 Wilson,
7 pks. Sons, & Co., Ld.
" 7
Rotterdam, { 29 3 cs. 5 cans 41 cks. Hull & Nether- 10 brls. lands S. S. Co.
Stettin, 18 cks. Wilson, Sons, & Co., Ld.

Cream of Tartar—
Bordeaux 2 cks.
Rotterdam, 2 Hull & Netherlands S. S. Co.

Dyestuffs—
Extracts
Boston, 200 brls. Wilson, Sons, & Co., Ld.

Indigo
Kurrachee, 80 cs. Wilson, Sons & Co., Ld.
Rotterdam, 8 chts. Hull & Netherlands S. S. Co.
Myrabolams
Bombay, 5,708 bgs.
Valonia
Smyrna, 1,979 bgs.

Farina—
Stettin, 400 bgs.

Glue—
Boston, 5 brls. Wilson, Sons, & Co., Ld.
Hamburg, 80 bgs.
Rotterdam, 15 Hull & Netherlands S. S. Co.

Glue Stock—
Hamburg, 8 bls. Wilson, Sons, & Co., Ld.

Litharge—
Amsterdam, 16 cks. Hull & Netherlands S. S. Co.

Lithopone—
Amsterdam, 40 cks. Hull & Netherlands S. S. Co.
Bremen, 4

Manure—
Bombay, 50 bgs.
Kurrachee, 280

Painters' Colours—
Hamburg, 70 pks.

Phosphorus—
Antwerp, 1 cs. Wilson, Sons, & Co., Ld.

Potash—
Dunkirk, 10 cks. Wilson, Sons, & Co., Ld.
Hamburg, 12

Soap—
Gothenburg, 1 cs. Wilson, Sons, & Co., Ld.

Soda—
Hamburg, 740 bgs. Bailey & Leetham, Ld.

Sodium Phosphates—
Antwerp, 4 cks. Wilson, Sons, & Co., Ld.

Starch—
Amsterdam, 20 bgs. Hull & Netherlands S. S. Co.
Antwerp, 100 Wilson, Sons, & Co., Ld.
" 80 cs A. W. Hall & Sons
Bremen, 1,084 Veltmann & Co.
Ghent, 106 Wilson, Sons, & Co., Ld.
Rotterdam, 64 Hull & Netherlands S. S. Co.

Stearine—
Aalesund, 1 brl. Wilson, Sons, & Co., Ld.

Tallow—
Boston, 190 cks.
Dunkirk, 119 Wilson, Sons, & Co., Ld.

Tartaric Acid—
Rotterdam, 14 cks. Hull & Netherlands S. S. Co.

Turpentine—
Bordeaux, 60 brls.

Ultramarine—
Bremen, 10 cks.
Rotterdam, 8 cs. Hull & Nether-
42 cks. lands S. S. Co.

Varnish—
Antwerp, 3 pks. J. G. Glew

Waste Salt—
Dunkirk, 50 bgs. Wilson, Sons, & Co., Ld.
Hamburg, 1,550

White Lead
Antwerp, 25 cks. Bailey & Leetham, Ld.
" 1 kg.
Rotterdam, 83 cks. Hull & Netherlands S. S. Co.

Wood Pulp—
Christiania, 1,047 bls. Wilson, Sons, & Co., Ld.
Drontheim, 1,560 "
Gothenburg, 107 "
Helsingfors, 483 J. Good & Sons
Stettin, 80 pks. Wilson, Sons, & Co., Ld.

Zinc Oxide—
Antwerp, 20 brls. Bailey & Leetham, Ld.
" 1 cs. Wilson, Sons, & Co., Ld.

GLASGOW.

Week ending June 15th.

Acetate of Lime—
Antwerp, 34 bgs.

Acetic Acid—
Rouen, 10 cks.

Barium Sulphate—
Antwerp, 43 cks. / 500 bgs.

Bleaching Powder—
Hamburg, 34 cks. J. Currie & Co.

Castor Oil—
Antwerp, 56 cks.
Marseilles, 1 / 120 brls.

Coal Products—
Alizarine
Rotterdam, 29 cks. J. Rankine & Son
4 cs.
Aniline
Rotterdam, 2 cks. J. Rankine & Son

Colours—
Hamburg, 11 cks. J. Currie & Co.
Rotterdam, 4 / 14 brls. / 4 bxs. J. Rankine & Sons

Cottonseed Oil—
New York, 300 brls.

Dyestuffs—
Cutch
Rangoon, 642 bxs. P. Henderson & Co.
Extract
Fiume, 204 brls.
Nantes, 45 cks.
Rouen, 6
Indige
Rotterdam, 6 chts. J. Rankine & Son

Farina—
Delfszyhl, 700 bgs. J. Rankine & Son
Hamburg, 100 J. Currie & Co.

Glucose—
Hamburg, 30 cks. J. Currie & Co.
New York, 1,929 brls. / 100 pks.

Glue—
Antwerp, 6 cks. / 5 bls.
Fiume, 100 bgs. A. Steven & Son
" 400
Genoa, 26 cks.
Rotterdam, 40 bgs. J. Rankine & Son
Rouen, 4 cks.

Glue Stock—
Hamburg, 8 bls. J. Currie & Co.

Gypsum—
Antwerp, 2,000 bgs.

Molasses—
New York, 298 brls.

Ochre—
Rouen, 102 cks.

Oxalic Acid—
Rotterdam, 6 cks. J. Rankine & Son

Paint
New York, 63 kgs. / 1½ brls.

Painters' Colours—
Antwerp, 13 cks.

Paraffin Wax—
New York, 100 brls.
Philadelphia, 200
Rangoon, 81 cs. P. Henderson & Co.

Phosphates—
Bona, 1,700 t.

Potash—
Hamburg, 84 cks. J. Currie & Co.

Pyrites—
Huelva, 1,865 t. Tharsis Sulphur & Copper Co.

Red Lead—
Rotterdam, 4 cks. J. Rankine & Son

Rosin—
New York, 100 brls. / 750 pks.

Salt—
Hamburg, 1,199 bgs. J. Currie & Co.

Soap—
New York, 100 pks.
Phil'delphia, 1,002 bxs. / 25 cs.
Rotterdam, 10 cs. J. Rankine & Son

Sodium Bicarbonate—
Fiume, 4 cks.

Starch—
Antwerp, 60 cs.
Baltimore, 400 bgs.
Fiume, 35 H. M. Hannan
Hamburg, 200 J. Currie & Co.
Rotterdam, 76 cs. J. Rankine & Son

Stearine—
New York, 36 brls.
Rotterdam, 200 J. Rankine & Son

Tallow—
Baltimore, 55 brls.
New York, 21 pks.

Ultramarine—
Hamburg, 10 cks. J. Currie & Co.

Varnish—
Antwerp, 2 cks. / 2 crts.
New York, 100 brls. / 14 pks.

Waste Salt—
Hamburg, 353 t. J. Currie & Co

White Lead—
Antwerp, 5 cks.
Rotterdam, 20 J. Rankine & Son
" 29

Wood Pulp—
Christiania, 4,855 bls. J. T. Salvesen & Co.
Frano, 2,066 W. G. Taylor & Co., Ld.
Gothenburg, 207

Zinc Oxide—
New York, 150 brls.
Rotterdam, 25 cks. J. Rankine & Son.

TYNE.

Week ending June 10th.

Barytes—
Rotterdam, 22 cks. Tyne S. S. Co.

Chemicals (*otherwise unoescribea*)
Rotterdam, 1 cs. Tyne S. S. Co.

Coal Products—
Pitch
Hamburg, 60 cks. Tyne S. S. Co.

Colours—
Hamburg, 53 cs. Tyne
10 cks. S. S. Co.
Rotterdam, 2 / 1 cs. "

Farina—
Hamburg, 50 bgs. Tyne S. S. Co.

Glucose—
New York, 99 bls. C. Hassel & Son

Phosphates—
Antwerp, 680 t. Langdale's Chemical M. Co.
Treport, 198 "

Pyrites—
Huelva, 1,714 t. Tharsis Sulphur & Copper Co.
" 3,205 Bede Metal & Chemical Co.

Rosin—
New York, 200 bls. C. Hassel & Son

Soap—
New York, 1,300 bxs. C. Hassel & Son
Rotterdam, 2 cs. Tyne S. S. Co.

Starch—
Rotterdam, 60 cs. Tyne S. S. Co.

Varnish—
Rotterdam, 1 cs. Tyne S. S. Co.

Wood Pulp—
Arendal, 400 bls. P. H. Matthiessen & Co.
Christiania, 1,460 "
Gothenburg, 150 pks.
Rotterdam, 110 bls. Tyne S. S. Co.

GOOLE.

Week ending June 7th.

Alkali—
Calais, 9 cks.

Antimony—
Boulogne, 1 ck.

Barytes—
Antwerp, 36 cks. / 322 bgs.

Bog Ore—
Delfszyhl, 157 t.

Caoutchouc—
Boulogne, 39 cks. / 2 bgs.
Hamburg, 1 cs.

Coal Products—
Aniline Salt
Rotterdam, 4 cks.

Colours—

Amsterdam,	5 cks.	3 cs.	
Boulogne,	65		217 pks.
Hamburg,	23	9	
Rotterdam,	234	43	1

Dyestuffs—
Indigo
Rotterdam, 5 brls.

Farina—
Delfszyhl, 252 bgs.
Hamburg, 374

Glucose—
Hamburg, 40 cks.

Lead Acetate—
Hamburg, 16 cks.

Phosphates—
Dunkirk, 800 bgs.
Ghent, 808

Pyrites—
Bossmo, 1,050 t.

Saltpetre—
Hamburg, 8 cks.

Soda—
Rotterdam, 20 cks.

Sodium Chromate—
Rotterdam, 1 ck.

Starch—
Ghent, 303 cs.

Tartar—
Rotterdam, 2 cks.

Tin Ashes—
Antwerp, 4 cs.

Waste Salt—
Hamburg, 300 t. / 668 cks.

Wood Pulp—
Hamburg, 340 pks.
Skien, 2,197 bs.

GRIMSBY.

Week ending June 10th.

Alkali—
Hamburg, 7 pks.

Barytes—
Rotterdam, 100 bgs.

Caoutchouc—
Antwerp, 1 cs.
Hamburg, 4 16 pks
Rotterdam, 3

Chemicals (*otherwise undescribed*)
Hamburg, 2 cks.
Rotterdam, 19

Colours—
Antwerp, 4 cks. 59 pks.
Hamburg, 30 10 cs. 37
Rotterdam, 1 kg. / 6 cks.

Dyestuffs (*otherwise undes.*)—
Dieppe, 23 cks.

Farina—
Hamburg, 100 bgs.

Ferro Chrome—
Hamburg, 2 cks.

Glue—
Antwerp, 2 cs.

Waste Salt—
Hamburg, 500 bgs.

Wolfram Ore—
Hamburg, 5 cs.

Zinc Ashes—
Antwerp, 8 cks.

EXPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending June 14th.

Alkali—
Rio de Janeiro, 6 c. £7

Ammonia (Anhydrous)—
Cologne, 22 cyldrs. £60

Ammonium Carbonate—
Antwerp, 8 t. 6 c. £230
Hamburg, 17 pks. 56
Rangoon, 20 cs. 43

Ammonium Muriate—
Dusseldorf, 5 t. 8 c. £100

Ammonium Sulphate—

Barbadoes,	150 t.		£1,950
Charente,	91	5 c.	1,150
Hamburg,	80		975
Kobe,	102		1,300
Madras,	3		45
Nantes,	10		125

Arsenic—

Hiogo,	20 kgs.		£21
Yokohama,	10		10

Bleaching Powder—
Hong Kong, 3 c. £6

Bone Ash—
Delagoa Bay, 1 t. £37

Boracic Acid—

Amsterdam,	4 cks.		£26
Sydney,	1 t.		30

Borax—

Antwerp,	16 cks.		£35
Delagoa Bay,	7 c.		10
Pt. Darwin,	5	5 cs.	40

Carbonic Acid Gas—

Channel Is.,	46 tubes		£17
Pt. Elizabeth,	3 cs.		24

Caustic Soda—

Bangkok,	7 c.		£5
Gisborne,	2		5
Santos,	21 t.	11	166
Wellington,	14	19	109

Chemicals (*otherwise undescribed*)

Antwerp,	32 cks.		£466
Auckland,	4 kgs.		19
B. Ayres,	58 cs.		121
Bombay,	5		64
Boulogne,		10 pks.	62
Brisbane,	1		18
Brussels,		28	187
Calcutta,	3 cks.		31
Cape Town,	1		32
Christchurch,		12	34
Delagoa Bay,	2		26
Demerara,		125 cbys.	32
Dunedin,	12	3	23
Durban,		6 16 pks.	66
E. London,	1		12
Genoa,	30 kgs.		171
Gd. Canary,		3	18
Hong Kong,		6	26
Lisbon,	4		35
M. Video,	15		50
New York,	18 cks.		106
Paris,		60	112
Pt. Darwin,	8		28
Rosario,	15 c.	24	47
Rotterdam,		27	110
Sydney,	2		43
Wellington,	3		11
Melbourne,	17		80

Citric Acid—

Brussels,	5 c.		£35
Calcutta,	2		16
Canterbury,	2		16
Delagoa Bay,	2		17
Dunedin,	4 kgs.		30
Durban,	1		8
E. London,	5		44
Hamburg,	10 10	18 pks.	737
	16 cks.	35 dms.	
Invercargill,	5 kgs.		38
Lisbon,	10		74
Montreal,	1 t. 2		45
Rotterdam,	15		108
St. Petersburg,	7		28

Coal Products—
Alizarine
Boston, 7 cks. £89

Aniline
Ipswich, 2 cs. £20
Aniline Dyes
Dunedin, 1 cs. £18
Anthracene Oil
Gothenburg, 250 cks. £185
Benzine
Antwerp, 2 cs. £10
E. London, 10 dms. 6
Benzol
Boulogne, 50 cks. £155
Benzoline
E. London, 10 dms. £7
Carbolic Acid
Calcutta, 1 cs. £5
Dunedin, 200 dms. 81
Sydney, 5 cks. 11
Creosote
Bordeaux, 3,042 cks. / 2,992 brls. £4,168
Dieppe, 61,739 galls. 324
Naphthaline
Pt. Elizabeth, 2 cks. £18
Pitch
Alexandria, 200 brls. £68
Amsterdam, 740 t. 814
Antwerp, (in bulk) 470
" 1,233 1,355
Boston, 450 cks. 225
Galatz, 100 brls. 24
Halifax, 94 85
Montreal, 350 90
Raumo, 375 t. 469
St. Nazaire, 680 954
Tar
Durban, 70 dms. £7
Raumo, 994 rns. 100 brls. 647
Wellington, 12 50 24
Toluol
Antwerp, 5 dms. £52

Copper Sulphate—
Auckland, 8 c. £11
Delagoa Bay, 4 7
Durban, 10 16
Ghent, 10 t. 259

Cream of Tartar—
Auckland, 10 c. £42
Dunedin, 13 59

Cyanogen and Bromide –
Montreal, 8 c. £90

Disinfectants—
Brisbane, 44 pks. £10
Calcutta, 200 dms. 13
Durban, 57 pks. 27
Jamaica, 25 dms 22
Madras, 10 18
Paris, 24 cks. 21
Penang, 225 90
Pt. Elizabeth, 8 130 pks. 34
Singapore, 81 / 25 dms. 63
Sydney, 13 cs. 48
Trinidad, 50 pks. 90

Manure—
Colombo, 90 t. £560
Durban, 15 c. 11
Madeira, 10 70
Malaga, 39 9 316
Salobrina, 550 4,400

Phosphoric Acid—
New York, 23 cs. £78

Potash—
Melbourne, 1 t. 8 c. £45
Pt. Elizabeth, 1 1 30

Potassium Bicarbonate—
Melbourne, 6 kgs. £15

Potassium Bichromate—
Dunedin, 5 cks. £76
Lyttelton, 1 t. 1 t. 34

Potassium Cyanide—
Auckland, 4 t. £402
Canton, 4 c. 16
Delagoa Bay, 100 cs. 1,109
Madras, 6 15
Melbourne, 2 40 650
Montreal, 1 14 160
Pt. Elizabeth, 1 10 158
Sydney, 2 224
Townsville, 5 50 1,182

Saltpetre—
Bahia, 3 t. 15 c. £82
Brisbane, 11 10
Canterbury, 10 10
Invercargill, 10 10
Melbourne, 2 40
Oporto, 1 2 21
Rio de Janeiro, 16 16
Syra, 8 4 160
Vigo, 2 19 60

Sheep Dip—
Hobart, 15 cs. 25 dms. £20
Pt. Elizabeth, 12 pks. 7
Wellington, 100 370 dms. 763

Soda—
B. Ayres, 1 t. 3 c. £15
Cape Town, 2 16 19
Dunedin, 1 6
Hong Kong, 1 2 19
Rotterdam, 5 9 30

Soda Crystals—
Durban, 1 t. 13 c. £5

Sodium Bicarbonate—
Brisbane, 1 t. £5
Christchurch, 16 t 8 c £76
Pt. Elizabeth, 1 11 c. 17

Sodium Hyposulphite—
Dunedin, 4 t. 2 c. £83

Sodium Silicate—
Zante, 10 t. £37

Sodium Sulphide—
Dunedin, 2 t. 2 c. £15

Sulphur—
Adelaide, 10 t. £54
Brisbane, 10 c. 5
Durban, 9 cks. 8
E. London, 1 t. 7 13

Sulphuric Acid—
Bombay, 4 t. £25
Durban, 15 c. / 10 cs. 15 pks. 39

Tartaric Acid—
Auckland, 5 c. £27
Bombay, 1 t. £125
Canterbury, 2 12
Dunedin, 2 11
Karachi, 6 35
Melbourne, 1 108
St. Petersburg, 7 25

LIVERPOOL.

Week ending June 14th.

Acetic Acid—
Barcelona, 12 t. 5 c. £275
Copenhagen, 5 13 125

Ammonia—
Adelaide, 3 c. 2 q. £10
Rangoon, 1 1 2

Ammonium Carbonate—
B. Ayres, 10 c. £13
Bordeaux, 14 pks. 29
Genoa, 1 t. 7 50
Habana, 5 8
Montreal, 20 cks. 24
New York, 2 10 69
Valencia, 11 115
Vera Cruz, 12 15
8

Ammonium Muriate—
Barcelona, 1 t. 8 c. £29
Brisbane, 1 1 3 q. 20
Marseilles, 5 5
Newfairwater, 6 113
Smyrna, 3 3
St. Petersburg, 2 7 40

Ammonium Sulphate—
Cheribon, 65 t. 6 c. 3 q. £653
Demerara, 94 11 2 1,213
Gd. Canary, 50 625
Las Palmas, 3 10 44
Malaga, 127 10 3 1,493
Philadelphia, 24 17 320
Samarang, 78 13 2 786
San Francisco, 142 15 1,722
Sourabaya, 52 7 528
Teneriffe, 5 63
Valencia, 323 1 3 3,619

Arsenic—
Marseilles, 27 cks. £87

Basic Slag—
Sables D'Olonne, 746 t. £1,120
San Francisco, 50 106

Bleaching Powder—
Antwerp, 29 cks.
Baltimore, 97
Boston, 226
Cambrai, 20
Chicago, 120 bxs.
Detroit, 29
Everett, 52
Indiana, 35
Lockhaven, 41
Milwaukee, 66
Montreal, 70
Newport News, 27
Philadelphia, 125
Rouen, 14
Venice, 25 brls.
Vera Cruz, 300

Boracic Acid—
Stettin, 5 t. 6 c. 1 q. £138

Borax—
Antwerp, 1 t. 19 c. 3 q. £38
Cardenas, 9 4
E. London, 10 10 3 194
Genoa, 2 10 21
Hamburg, 10 3 173
Havana, 1 2 16
Montreal, 10 155
M. Video, 6 3 6
New York, 4 8 1 70
Rotterdam, 1 1 3 19
Rosario, 1 4 2 23

Calcium Carbide—
Algoa Bay, 10 c. £22
Natal, 1 t. 5 26

Calcium Chloride—
Adelaide, 4 t. 10 c. £11
Boston, 25 18 49
Odessa, 30 9 63

Castor Oil –
Axim 5 cs.

Caustic Potash—
Chicago, 1 t. 11 c. £42

Caustic Soda—
Acajutla, 42 dms.
Alexandria, 90
Amsterdam, 15
Antwerp, 85
Beyrout, 12
Brisbane 20
B. Ayres, 20 70 kgs.
Calcutta, 170
Cartagena, 15 pks.
Chicago 40 bxs.
Christiania, 2
Copenhagen, 5
Dayton, 50
Delagoa Bay, 51
E. London, 20 cs.
Fairwater, 70
Fiume, 33
Fremantle, 49
Hamburg, 102
Hiogo, 52
Limon, 25
Limassol, 10
Lisbon, 18
Melbourne, 46
Mexico, 30
Montreal, 200 100 pks.
N. Orleans, 50
Naples, 35
New York, 50 125 brls.
Odessa, 425
Oporto, 45
Para, 30
Parahyba, 15
Parnahyba, 15
Paris, 34
Pernambuco, 32
Piræus, 30
Pt. Elizabeth, 15 cs.
Quebec, 10
Rio G. do Sul, 25 cks.
Rotterdam, 40
St. John, N.B., 50
San Francisco, 75 46
San Juan, 6
Sourabaya, 18
Sydney, 120
Tarragona, 10 15
Trieste, 44
Sourabaya, 40
Wellington, 25
Yokohama, 100

Chemicals *(otherwise undescribed)*
B. Ayres, 4 cks. £34
E. London, 2 t. 200
Genoa, 3 5 c. 115
Madras, 5 brls. 24
Natal, 3 cks. 5
Philadelphia, 26 t. 3 c. 660
Rosario, 12 2 q. 5
San Francisco, 1 35
Trieste, 4 20

China Clay—
Baltimore, 800 cks
Barcelona, 20
Bombay, 227
Boston, 850
Calcutta, 320
Madras, 80
New York, 400
Pernambuco, 60
Rio de Janeiro, 32
Santos, 4
Torino, 4

Chromic Acid—
Philadelphia, 10 c. £30

Citric Acid—
Bluefields, 5 c. 1 q. £27

Coal Products—
Aniline Colours
Bombay, 3 cs.
Boston, 5 cks.
New York, 19
Valleyfield, 7 kgs. 1
Aniline Dye
Barcelona, 1 cs.
Aniline Salt
Boston, 60 cs
Carbolic Acid
Kingston, Ont., 10 c. £28
Lagos, 2 cs. 8
Sydney, 1 t. 5 c. 16
Creosote Oil
Bordeaux, 260 cks.
Lisbon, 200 brls.
Pitch
Antwerp, 240 t. 3 c.
Montreal, 3 brls.
Rosario, 14 cks.
Rouen, 312 t. 10 c.
Santander, 4 cks.
Tar
Calcutta, 20 cks.
Ibrail, 10 brls.
Las Palmas, 12
Tar Oil
Rosario, 129 brls.

Copperas—
Syra, 5 t. 19 c. £10

Copper Sulphate—
Alexandria, 1 t. 1 c. £24
Bahia, 5 8
Bilbao, 4 19 130
Bordeaux, 29 18 3 q. 750
Brisbane, 2 51
Galatz, 1 20
Genoa, 11 6 245
Ghent, 5 130
Havre, 9 2 3 178
Montreal, 5 2 128
Nantes, 9 16 3 256
Naples, 9 18 217
Newfairwater, 2 9 60

Disinfectants—
Alexandria, 1 cs. £10
Calcutta, 1 t. 15 c. 27
Hamilton, 7 10
New York, 4 cs. 28
Shanghai, 10 c. 2 q. 9

Dried Blood—
Gd. Canary, 5 t. £39

Glycerine—
Bilbao, 9 t. 14 c. £359
Bombay, 10 20
Halifax 60
Montreal 60
Rangoon, 3 cs. 16
San Francisco, 49 10 c. 2,030

Iron Oxide—
New York, 9 c. £8

Magnesia—
Constantinople, 3 cks.
New York, 10 cs.
Penang, 20

Manure—
Barcelona, 20 t. 7 c. £111
B. Ayres, 1 7 3 q. 28
G. Canary, 23 191
Manila 20 130

Nitric Acid—
Rangoon, 1 cs. £10

Oxalic Acid—
Boston, 10 t. 6 c. 1 q. £260
Habana, 2 3

Paint—
Antwerp, 16 kgs. 5 dms.
Arecibo, 72
Arroyo, 2 cks.
Axim, 110
Cape Town, 1 cs.
Cartagena, 20
Dunkirk, 40 2
Havana, 12
Hong Kong, 1 brl, 88 dms.
Kerasunde, 2 cks.
Limon, 10 cs.
Malta, 10 6 4
Manaos, 83
Manila, 100 8
Matanzas, 4 tcs.
Mayaquez, 7 dms.
M. Video, 20 20
New York, 4 cks.
Ponce, 8 dms.
Rangoon, 2 cks.
Sagua La Grande,
St. John's, N'fd, 634 pks.
San Francisco, 11 brls. 2
San Juan, 10
Sierra Leone, 160 kgs.
Smyrna, 100
Talcahuano, 20
Valparaiso, 135
Wellington, 13

Painters' Colours—
Bombay, 109 kgs. 1 cs.
B. Ayres, 5 39 cks.
Calcutta, 3
Cardenas, 36 5 brls.
Cogenhagen, 12
Dunkirk, 29
Havana, 51
Lisbon, { 1 bx. 1 / 4 pks.
Montreal, 40
Philadelphia, 100
Rangoon, 29
Rio de Janeiro, 15
St. John, N.B., 1
Tampico, 3
Vera Cruz, 174
Wellington, 16 cs. 1 ck.

Paraffin Wax—
Lisbon, 5 bgs.
Singapore, 10 cks.

Phosphorus—
Demerara, 2 cs. £16
San Juan, P.R., 2 c. 21
Seville, 3 q. 7
Tampico, 6 53

Potassium Bichromate—
Yokohama, 4 t. 19 c. £160

Potassium Carbonate—
Manaos, 1 t. 8 c. 3 q. £22

Potassium Chlorate—
Gutujewsky, 29 t. 9 c. £870
Hong Kong, 2 60
Libau, 10 300
Paranagua 5 132
St. Petersburg, 51 1,533
Shanghai, 8 10 280

Potassium Cyanide—
Cuidad Bolivar, 7 c. 1 q. £51

Potassium Prussiate—
Vera Cruz, 1 t. £60

Potassium Stannate—
Bombay, 3 c. £3

Salammoniac—
Bari, 4 cks. £20
Gijon, 5 c. 2 q. 10
Montreal, 9 14
St. Petersburg, 10 t. 12 285
Trieste, 1 31

Salt—
Antwerp, 40 t.
Bakana, 20
Baltimore, 15 c.
Barbadoes, 25
Bilbao, 6 cs.
Bonny, 20
Boston, 400
Brisbane, 5
Belize, 426 10 c.
Cameroons, 50
Christiania, 59 2
Cienfuegos, 35
Cleveland 100
Conakry, 20
Demerara, 44 12
E. London, 15
Ghent, 125
Halifax, 238 13
Hamburg, 29 10
Iceland, 108
Lagos, 350
Manaos, 84 7
Matadi, 20 10
M. Video, 30
Montreal, 362 10
Newcastle, 100
N. Plymouth, 200
N. Orleans, 2'5
New York, 645 1 cs.
Noqui, 40 3 c
Old Calabar, 61
Pictou, 300
Pueget Sound, 39 18
Savanilla, 4 cs
St. John, N.B., 600
St. John's N'fd., 20
San Francisco, 65
Santiago, 50
Sydney, 140
Wellington, 50

Sheep Dip—
Algoa Bay, { 570 dms. / 10 cs. £83
B. Ayres, 2 t. 9 c 100
Punta Arenas, 8 9 200

Soap—
Aden, 50 bxs.
Alexandria, 1 cs.
Algoa Bay, 10 23 cks.
Amboina, 650
Barbadoes, 600
Belize, 1,040
Bombay, 2,475 40
Bordeaux, 400
Boston, 20 pks.
B. Ayres, 30
Cabenda, 3
Calcutta, 83 300 bdls.
Canaria, 762
Cameroons, 100
Canea, 15
C. C. Castle, 25 17
Cape Town, 5 4,100 pks.
Caracas, 1 ble.
Cartagena, 1
Christiania, 100
Constantinople, 54
Copenhagen, 1
Delagoa Bay, 615 5
Demerara, 700 2 5 bdls.
Dominica, 30
E. London, 625 80
Fremantle, 2,000
Ghent, 100
Gibraltar, 235
Grenada 100
Guantanamo, 50
Halifax, 400
Karachi, 1,260 10
Lagos, 90
Lucea, 131
Madras, 79 1 ck.
Malta, 55
Maranham, 920
N. Orleans, 200
New York, 29
Old Calabar, 800
Opobo, 3,600
Palmas, 1,000
Para, 2,550 500 bdls.
Pt. Natal, 200
Rangoon 2,016 32
Rio Del Rey, 112
Rotterdam, { 10 brls. / 425 cs. 108 dms.
Shanghai, 20 2,429
San Juan, 200
Santiago, 50
Sierra Leone, 1,040
Singapore, 1,673
Surinnam, 61
Tamanfu, 10
Tangiers, 45
Ternate, 500
Timore, 50
Toronto, 1,000
Trinidad, 2,405
Truxillo, 50 bdls.
Zanzibar, 250

Soda Ash—
Baltimore, 19 tcs.
Barcelona, 25 bgs. 26 cks.
Bari, 300
Boston, 26 35
Brussels, 499
B. Ayres, 199
Calcutta, 34
Copenhagen, 500
Genoa, 600
Ghent, 434
Gothenburg, 100 16
Johannesburg, 33
Kobe, 50
Lagos, 30 kgs
Leghorn, 23
Maranham, 8 brls.
Melbourne, 810
N. Orleans, 26 tcs.
New York, 117
Piræus, 10 brls.
Rio de Janeiro, 25
Rio G. do Sul, 100
Samarang. 40
Sherbrooke, 1,600 bgs.
Skien, 50
Sourabaya, 20
Sydney, 95
Tetschen, 500
Toronto, 120
Trieste, 100
Venice, 100
Willebrseck, 600
Windsor Mills, 320
Yokohama, 20

Soda Crystals—
Alexandria, 225 brls.
Alicante, 10 cks.
Boston, 56
B. Ayres, 50 kgs.
Cape Town, 10 10
Constantinople, 193
Malta, 110
Quebec, 34
Valparaiso, 30

Sodium Arseniate—
Boston, 10 cks.

Sodium Bicarbonate—
Alexandria, 160 bgs.
Algiers, 60 kgs.
Algoa Bay, { 20 bgs. / 20 kgs.
Amsterdam, 70
Antwerp, 5 cks.
Barcelona, 250
Batavia, 10
Bombay, 226 24
Brisbane, 40
Calcutta, 50
Cape Town, { 8 bgs. / 10 kgs.
Constantinople, 30 2
Corunna. 4
E. London, 20 bgs.
Galatz, 48 kgs.
Genoa. 25
Gutujewsky, 700
Ibrail, 35
Johannesburg, 24
Karachi, 275
Konigsberg, 18 pks.
Leghorn, 90 20 brls. 3 cks.
Madras, 16
Malta, 12 dms.
Marseilles, 120 70
Mombassa, 14 cks
Montreal, 270
Naples, 92
Odessa, 100 200 dms.
Nicaragua, 20
Paris, 80
Pelotas, 11 cks.
Pt. Natal, 40
Rotterdam, 40
Salonique, 40
Santos, 180
Singapore, 17
Sydney, 670 55
Venice, 100

Sodium Carbonate—
Amsterdam, 13 brls.
New York, 126

Sodium Chlorate—
Boston, 50 kgs.
Gutujewsky, 300
Hamburg, 4 brls.
Newfairwater, 30
Stettin, 200

Sodium Hyposulphite—
Naples, 5 cks.
Valparaiso, 10 brls.

Starch—
Lisbon, 6 cks.
Santos, 2 cs.

Sulphur—
Boston, 75 t. 3 c. £321
Cardenas, 14 1 q. 5
Montreal, 27 7 129
St. John, 100 4 426

Sulphuric Acid—
Colombo, 1 t. 16 c. 3 q. £8
Rio de Janeiro, 1 18 15

Superphosphates—
Delagoa Bay, 30 t. £98
Lisbon, 10 3 q. 18
Madeira, 50 150
Nantes, 147 12 c. 255
Natal, 36 117
Valencia, 400 850

Tartaric Acid—
Cienfuegos, 1 c. £6

Varnish—
Barcelona, 2 brls.
Mucalla, 10
Waterville 1 cs.

Zinc Chloride—
Bombay, 10 t. 18 c. 1 q. £184

MANCHESTER.

Week ending June 14th.

Ammonium Carbonate—
Stettin, 8 cks.

Bleaching Powder—
Sherbrooke, 50 cks.

Caustic Soda—
Beyrout, 7 dms.
Tunis, 9

Chemicals *(otherwise undescribed)*
Alexandretta, 10 cks. 5 brls.
Alexandria, 100
Antwerp, 1 cs. 19 pks.
Bombay, 66 brls.
Montreal, 165 20½ tcs.
Tunis, 5

Coal Products—
Aniline Oil
Russia, 42 dms.
Aniline Salt
Russia, 27 cks.
Carbolic Acid
Germany, 25 cks.
Montreal, 11
Naphthylamine
Germany, 34 cks.
Pitch
Belgium, 203 t. 1 c.
St. Louis du Rhone, 850
Tar Oil
Belgium, 15 brls.
Beyrout, 15
Tar Salts
Alexandrows, 46 bgs.

Colours—
Beyrout, 45 kgs. 2 brls.
Germany, 1 ck.
Magog, 1

Dyestuffs *(otherwise undes.)—*
Melbourne, 6 cks.

Dyestuffs—
Indigo
Monastier, 2 chts.
Sfax, 1
Tunis, 1 cs.

Farina—
Bombay, 25 bgs.

Gamma Acid—
Germany, 10 cks.

Glue—
Belgium, 10 cks.

Glycerine—
Germany, 10 dms.

Linseed Oil—
Beyrout, 5 brls.

Paint—
Alexandria, 8 dms.

Paraffin Wax—
Copenhagen, 4 cs.
Hamburg, 10

Salammoniac—
Alexandria, 10 cks.

Salt—
Montreal, 350 t.

Soap—
Montreal, 150 cs.

Sodium Naphthionate—
France, 55 bgs.

Tallow—
Bombay, 43 brls.

Varnish—
Bombay, 4 dms.

Venetian Red—
Alexandria, 75 cks.

Wood Pulp—
Melbourne, 1 cs. 8 bdls.

HULL.

Week ending June 10th.

Ammonium Sulphate—
Palermo, 229 bgs.
Rotterdam, 500

Basic Slag—
Reval, 3,110 bgs.
Stettin, 765 t.

Bleaching Powder—
Danzig, 16 cks.
Stettin, 25

Borax—
Christiania, 2 cs.

Caustic Soda—
Reval, 54 cks. 100 dms.
Riga, 62

Chemicals *(otherwise undescribed)*
Amsterdam, 47 cks.
Antwerp, 1 cs. 7 pks.
Christiania, 1,070 slbs.
Copenhagen, 20
Gothenburg, 15
Hamburg, 10
Helsingfors, 7
Odessa, 747 10 pks.
Riga, 100
Rotterdam, 46 248 8
St. Petersburg, 4 198
Stockholm, 1

Coal Products—
Creosote
Bordeaux, 1,313 cks.
Pitch
Antwerp, 195 t.
Helsingfors, 115 cks.
Tar
Abo, 125 cks.
Amsterdam, 3
Antwerp, 3

Christiania, 10
Copenhagen, 20
Danzig, 5
Gothenburg, 2
Hamburg, 10
Helsingfors, 10
Rotterdam, 13
Stettin, 5

Cottonseed Oil—
Amsterdam, 11 t. 2 c.
Antwerp, 17
Copenhagen, 10 11
Odessa, 2 1
Rotterdam, 39 1

Dyestuffs (*otherwise undescribed*)
Christiania, 3 cs.

Guano—
Hamburg 50 t.

Linseed Oil—
Antwerp. 1 t. 10 c.
Christiania, 5 10
Christiansand, 1 15
Copenhagen, 3
Ghent, 7
Hamburg, 20 17
Rotterdam, 6 17
Stavanger, 17
Trieste, 1 16

Manure—
Bordeaux, 8 bgs.

Paint—
Christiania, 16 cks. 1 cs.

Painters' Colours—
Abo, 150 cks.
Amsterdam, 2
Antwerp, { 228 97 cs. 47 pks. 63 dms
Bergen, 1
Christiania, 27 28
Constantinople, 1
Copenhagen, { 3 3 pks. 2 dms.
Fiume, 4
Ghent, 1 50
Gothenburg, 12
Hamburg. 6
Helsingfors, 1
Odessa, 55
Riga, 15 1
Rotterdam, 12 3 5
St. Petersburg, 45
Stettin, 10 3
Stockholm, 1

Soap—
Odessa, 4 c.

Starch—
Bergen. 1 cs.
Copenhagen, 140

Tallow—
Amsterdam, 125 cks.
Gothenburg, 3
Hamburg, 1
Rotterdam, 26

Varnish—
Antwerp, 1 ck.
Christiania, 5 cs. 1 ble.
Hamburg. 2
Rotterdam 5
St. Petersburg, 1
Stettin, 4
Stockholm, 2

GLASGOW.

Week ending June 15th.

Ammonia—
Bergen, 19 c.

Ammonium Carbonate—
Melbourne, £40

Ammonium Sulphate—
Amsterdam, £633
Barcelona, 102 t. 1 c. 3 q.
Madras, 9 19 1
Valencia, 75 18 3

Arsenic—
Canada, £22

Bleaching Powder—
Calcutta, 30 t. 3 c.
Melbourne, 3 1 q.

Boracic Acid—
Hiogo, £41
Melbourne, 68 15s.
Montreal, 66

Borax—
Canada, £60
Melbourne, 55
Montreal, 43 11s.

Chemicals (*otherwise undescribed*)
Melbourne, £22

Coal Products—
Carbolic Acid
Amsterdam, £100
Rotterdam, 110
Creosote Oil
Bordeaux, £3,000
Danzig, 31 t. 13 c.
Russia. 350
Naphtha
Christiania, £20
Pitch
Bombay, £57
Calcutta, 45 10s.
Danzig, 193 t.
Gothenburg, 225
Tar
Algoa Bay, £27 12s.
Bergen, 6 t. 5 c.
Boston, 105
Calcutta, 408 15
Danzig, 9 10
Madras, 25 10
Russia, 330

Dyestuffs (*otherwise undescribed*)
Christiania. £33

Dyestuffs—
Extract
Spain. £24 17s.
Fustic Extract
Canada, £143 6s.
Myrabolams Extract
Spain, £35

Dyewood Extract—
Gothenburg, £21 8s.

Gelatine—
Canada, £145
Philadelphia. 209

Glauber Salts—
Canada, £65

Glue—
Canada, £23

Iodine—
Rotterdam, £250

Lead Nitrate—
Canada, £25

Linseed Oil—
Canada, 4 t. 7 c.
Constantinople, 2 5
Kingston Jam., 6 17 2 q.
Melbourne, 2 4
Shanghai, 11 13 1
Singapore, 2

Logwood—
Canada, £118 7s.

Logwood Extract—
Canada, £160
Spain. 33
Victoria, Aus., 95

Magnesium Sulphate—
Adelaide, £21
Bombay, 30
Christiania, 10 t.
Melbourne, 31 12s.
Montreal, 64
Seville, 32 16

Manure—
Dunedin, 150 t.
Wellington, N.Z., 50

Paint—
St. John's, N'fd., £39

Painters' Colours—
Adelaide, £56 15s.
Boston, 182
Calcutta, 538
Hong Kong, 50

Paraffin Wax—
Barcelona, £38

Potassium Bichromate—
Adelaide, £32
Amsterdam, 136
Barcelona, 176
Hiogo, 150
Montreal, 378
Turkey, 34

Potassium Cyanide—
Pt. Darwin, £143

Potassium Prussiate—
Canada, £41

Sheep Dip—
Napier, N.Z., £350

Soap—
Canada, 2 t. 9 c.
Colombo, 1
Queenstown, 1 5
Shanghai, 2 10 1 q.
Singapore, 6 1

Starch—
Rotterdam, £13

Tallow—
Rotterdam, 6 t. 2 c. 1 q.

Varnish—
Calcutta, £37 15s.

White Lead—
Melbourne, £143
Transvaal, 39 10s.

Yellow Prussiate—
Barcelona, £70

TYNE.

Week ending June 10th.

Alkali—
Amsterdam, 32 t. 13 c. 3 q.
Bergen, 2 16 1
Christiania, 2 5 3
Gothenburg, 5 5 3
Libau, 1 15 1
Rotterdam, 2 5 3

Antimony—
Rouen, 2 t.
St. Petersburg, 10

Barium Carbonate—
St. Petersburg, 50 t. 14 c.

Barium Oxide—
Rouen, 1 t. 1 c. 1 q.

Basic Slag—
Christiania, 10 c.

Bleaching Powder—
Amsterdam, 20 t. 1 c. 3 q.
Antwerp, 60 1 2
Christiania, 12 2
Drontheim, 10 10
Gothenburg, 20 4
Hamburg, 5 5
Konigsberg 6 15 3
New York, 50 18
Rotterdam, 23 12 1
St. Petersburg, 105 18 1

Castor Oil—
Montreal, 1 t. 8 c.

Caustic Soda—
Amsterdam, 2 t. 10 c.
Antwerp 4 18 2 q.
Christiania, 1 9
Copenhagen, 4 18 2
Gothenburg, 55 2 3
Hamburg, 9 17 1
Konigsberg, 12
Malmo, 2 18
Nakskov, 4 7
New York, 100 9
Odense, 1 3 1
St Petersburg, 115 18

Chemicals (*otherwise undescribed*)
Montreal, 13 t. 1 q.
St. Petersburg, 10 13 c. 3

Citric Acid—
St. Petersburg, 1 t. 15 c.

Coal Products—
Creosote
New York, 42 t. 18 c.

Copperas—
Bergen, 1 t. 1 c. 2 q.

Ferro Manganese—
Christiania, 13 c. 3 q.

Fluor Spar—
Gothenburg, 83 t. 10 c.
New York, 53

Iron Oxide—
Christiania, 1 t. 1 q.

Litharge—
Amsterdam, 12 cks.
Christiania, 9 c. 2 q.
New York, 2 t. 5
Oporto. 6 2

Magnesia—
Hamburg, 1 t. 18 c. 2 q.
Odessa, 7 2
St. Petersburg. 1

Manganese—
Rouen, 5 t. 10 c. 3 q.

Paint—
Hamburg, 10 c.
Stavanger, 1 t. 5

Painters' Colours—
Rotterdam. 6 dms.

Red Lead—
Aarhuus, 1 t. 7 c. 1 q.
Amsterdam, 2 3 2
Bergen, 3 2 1
Christiania, 2 15
Copenhagen, 2 10
Galatz, 1 2
Gothenburg, 5 1 1
Hamburg, 22
Montreal, 13 13 3
New York, 1 10
Odense, 1 1 3
Oporto, 1 7 2
St. Petersburg, 13 15 1
Stavanger, 2 3

Red Oxide—
Montreal, 18 c. 2 q

Soda—
Amsterdam, 15 t. 15 c. 2 q.
Christiania, 5 15 1
Constantinople, 24 7 2
Rotterdam. 5 3

Soda Ash—
Bergen. 10 t.
Konigsberg, 27 14 c. 2 q.

Sodium Hydrosulphite—
Christiania, 19 c. 2 q.
New York, 25 t. 13

Sodium Sulphate—
Christiania, 5 t.
Gothenburg. 217

Sulphur—
Antwerp, 10 t.
Gothenburg. 30
Konigsberg, 2 10 c.
Sarpsborg, 375

Tallow—
Antwerp 5 t. 19 c. 2 q.
Rotterdam, 6 19

Varnish—
Christiania, 2 c.
Montreal, 9 3 q.

White Lead—
Copenhagen, 1 t. 3 q.
Oporto, 5 1 c 2
New York, 5

Witherite—
St. Petersburg, 27 t. 11 c. 1 q.

Zinc Ore—
Antwerp, 1,702 t.

GOOLE.

Week ending June 7th.

Chemicals (*otherwise undescribed*)
Amsterdam, 10 cks.
Antwerp, 19 10 dms.
Ghent, 1 cs.
Hamburg, { 16 20 3 pks. 69 dms.

Coal Products (*otherwise undes.*)—
Amsterdam, 119 cks.
Antwerp, 26 4 cs.
Boulogne, 63 1
Ghent, 5 12
Hamburg, 5
Rotterdam, 11 3

Coal Products—
Pitch
Antwerp. 905 t.

Dyestuffs (*otherwise undescribed*)
Calais, 4 cks. 1 cs.
Hamburg. { 60 bgs. 2 cks. 2
Rotterdam. 80 16

Manure—
Antwerp, 309 bgs.
Hamburg, 510
Rotterdam, 200

Painters' Colours—
Amsterdam, 3 cks.
Antwerp, 1
Boulogne, 1 cs.
Hamburg, 1
Rotterdam, 8

GRIMSBY.

Week ending June 10th.

Alkali—
Dieppe, 2 cks. 4 cs.
Gothenburg. 10

Ammonium Sulphate—
Hamburg. 20 t.

Caoutchouc—
Esbjerg, 2 cs.

Chemicals (*otherwise undescribed*)
Dieppe, 2 cks. 12 cs.
Hamburg, 100 dms.

Coal Products (*otherwise undes.*)—
Dieppe, 293 cks. 4 cs.

Dyestuffs (*otherwise undescribed*)
Gothenburg, 1 cs.

Manure—
Hamburg, 137 bgs.

Painters' Colours—
Antwerp, 10 cks. 4 cs. 1 pk.
Hamburg, 7 3
Rotterdam, 1

PRICES CURRENT.

WEDNESDAY, June 21, 1899.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary

	£	s.	d.
Acids:			
Acetic, 25 % and 40 % .. .. per cwt.	5/9	&	8/3
,, Glacial .. .. ,,		35/-	
Arsenic S.G. 2,000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	9
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1½
Oxalic .. .. nett ,,	0	0	3
Phosphoric, 1750° .. .. ,,	0	0	10¾
Picric .. .. ,,	0	0	11½
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, (,, 150°) .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2
Tartaric .. .. ,,	0	0	11¾
Arsenic, white powdered .. .. nett per ton	19	7	6
Alum, loose lump .. .. ,,	4	5	0
Alumina Sulphate (pure) .. .. ,,	3	15	0
Aluminoferric .. .. ,,	2	2	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett ,,	148	0	0
Ammonia, Anhydrous .. .. per lb.	0	1	2
,, ·880 = 28° B. .. .. ,,	0	0	2¾
,, = 24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3¼
,, Muriate .. .. per ton	21	10	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	35/-	&	33/-
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4
,, Sulphate (grey) London .. .. .. per ton	12	10	0
,, ,, (grey) Hull .. .. ,,	12	7	6
Aniline Oil (pure) .. .. per lb.	0	0	4½
Aniline Salt ,, ... ,,	0	0	4
Antimony .. .. per ton	39	10	0
,, (tartar emetic) .. .. per lb.	0	0	8
,, (golden sulphide) .. .. ,,	0	0	9
Barium Chloride .. .. per ton	6	12	6
,, Carbonate (native) .. .. ,,	3	15	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	4	2	6
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6¼
Calcium Chloride .. .. per ton	2	7	6
China Clay (at Runcorn) in bulk .. .. ,,	17/-	to	25/-
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. nett per lb.	0	0	6¾
Magenta .. .. ,,	0	3	9
Anthracene, 30% A, f.o.b. London .. per unit per cwt.	0	0	4
Benzol, 90's .. .. per gallon	0	0	6¾
,, 50/90 ,, ... ,,	0	0	7½
Carbolic Acid (crude 60°) .. .. ,,	0	2	1
,, (crystallised 40°) .. .. .. per lb.	0	0	7¼
,, (liquid 95/97%) .. .. .. per gallon	0	1	0
Creosote (ordinary) .. .. ,,	0	0	3½
,, (filtered for Lucigen light) .. .. ,,	0	0	4
Crude Naphtha 30% @ 120° C. .. .. .. ,,	0	0	4
Grease Oils, 22° Tw. .. .. per ton	3	0	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	5	0
Solvent Naphtha, 90% at 160° .. .. per gallon	0	0	10
Copper .. .. per ton	75	12	6
,, Sulphate .. .. ,,	25	0	0
,, Oxide (copper scales) .. .. ,,	57	0	0
Glycerine (crude) 80% .. .. ,,	25	10	0
,, (distilled S.G. 1250°) .. .. ,,	48	10	0
Iodine .. .. nett, per oz.	0	0	7½
Iron Sulphate (copperas) .. .. per ton	1	2	6
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) .. .. ,,	15	10	0
,, Litharge Flake (ex ship) .. .. ,,	17	0	0
,, Acetate (white ,,) .. .. ,,	22	15	0
,, ,, (brown ,,) .. .. ,,	17	15	0
,, *Carbonate (white lead) pure* .. .. .. ,,	18	10	0
,, *Nitrate* .. .. ,,	22	10	0

	£	s.	d.
Lime, Acetate (brown) (ex ship) .. .. .. per ton	5	0	0
,, ,, (grey) (ex ship) .. .. ,,	8	0	0
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	10	0
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton	9	10	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	12	6
Manganese, Sulphate .. .. ,,	14	15	0
,, Borate .. .. per cwt.	2	0	0
,, Ore, 70% .. .. per ton	3	10	0
Methylated Spirit, 61° O.P .. .. per gallon	0	2	1
Naphtha (Wood), Solvent .. .. ,,	0	2	10
,, ,, Miscible, 60° O.P. .. .. .. ,,	0	3	0
Oils:—			
Cotton-seed .. .. per ton	18	0	0
Linseed .. .. ,,	22	0	0
Stearine .. .. ,,	26	0	0
Phosphorus (Yellow) .. .. per lb.	0	1	1
,, (red) .. .. ,,	0	2	8
Potassium Bichromate .. .. nett ,,	0	0	3½
,, Carbonate, 90% (ex ship) .. .. .. per ton	16	0	0
,, Chlorate .. .. per lb.	0	0	3½
,, Cyanide, 98 % .. .. ,,	0	1	0½
,, Hydrate (Caustic Potash) 90 % .. per ton	22	10	0
,, ,, ,, 75/80 % .. ,,	18	0	0
,, Potash Hydrate Liquid 50 % .. .. ,,	11	10	0
,, Nitrate (refined) .. .. ,,	19	15	0
,, Permanganate .. .. per cwt.	2	12	6
,, Prussiate Yellow .. .. per lb.	0	0	8
,, Sulphate, 90 % (ex ship) .. .. .. per ton	9	15	0
,, Muriate, 80 % ,, ... ,,	8	15	0
Silver (metal) .. .. per oz.	0	2	3½
Sodium (metal) .. .. per lb.	0	2	6
,, Carb. (refined Soda-ash) 48 % .. nett per ton (f.o.r. w'ks.)	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	5	0
,, ,, (Carb. Soda-ash) 48 % .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Alkali) 58 % (Bags) .. .. ,, ,, (f.o.r. w'ks.)	4	0	0
,, ,, (Soda Crystals) .. .. .. ,, ,, (f.o.r. w'ks.)	2	10	0
,, Acetate (ex-ship) .. .. ,,	12	15	0
,, Arseniate, 45 % .. .. ,,	13	10	0
,, Chlorate .. .. per lb.	0	0	3¾
,, Borate (Borax) .. .. nett per ton	16	0	0
,, Bichromate .. .. ,, per lb.	0	0	2¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) nett per ton (10 ton lots)	7	12	6
,, ,, (74 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,, (10 ton lots)	7	0	0
,, ,, (60 % Caustic Soda) .. ,, ,, (10 ton lots)	6	0	0
,, ,, (pure liquor 90° Tw.) .. ,, ,, (10 ton lots)	3	10	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	11	10	0
,, Bicarbonate (cwt. kegs) .. .. ,,	6	15	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25 % .. .. ,,	15	10	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	8	0
,, Nitrite, 98 % .. .. per ton	26	0	0
,, Phosphate .. .. ,,	10	7	6
,, Prussiate .. .. per lb.	0	0	6¼
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	10	0
,, Stannate, 40 % .. .. per cwt.	3	10	0
,, Sulphate (Salt-cake) .. .. per ton	1	6	6
,, ,, (Glauber's Salts) .. .. .. ,,	1	12	6
,, Sulphide .. .. ,,	7	5	0
,, Sulphite .. .. ,,	5	2	6
Strontium Hydrate, 100 % .. .. ,,	9	10	0
Sulphocyanide Ammonium, 95 % .. .. .. per lb.	0	0	6
,, Barium, 95 % .. .. ,,	0	0	4¼
,, Potassium .. .. ,,	0	0	7
Sulphur (Flowers) .. .. per ton	6	15	0
,, (Roll Brimstone) .. .. ,,	6	0	0
,, Brimstone: Best quality .. .. ,,	4	12	6
Superphosphate of Lime (26 %) .. .. ,,	2	10	0
Tallow .. .. ,,	24	10	0
Tin Crystals .. .. per lb.	0	0	7½
,, English Ingots .. .. per ton	120	0	0
Zinc (Spelter) .. .. ,,	26	5	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	7	10	0
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Tenders are to be delivered at these Offices, under seal, endorsed "Tender for Disinfectants," on or before Tuesday, the 31st day of January instant, and must contain the names and addresses of two responsible persons to join the contractor in a contract for the due execution thereof.

No Tender will be received unless it is made upon one of the printed forms issued from these offices. The Board do not pledge themselves to accept the lowest or any Tender.

By Order of the Board of Works for the Wandsworth District.

HENRY GEORGE HILLS,

East Hill, Wandsworth, S.W., *Clerk to the Board*,
6th January, 1899.

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☞ **Replies to Advertisements addressed to the "Chemical Trade Journal" Office, are forwarded to Advertisers, post free.**

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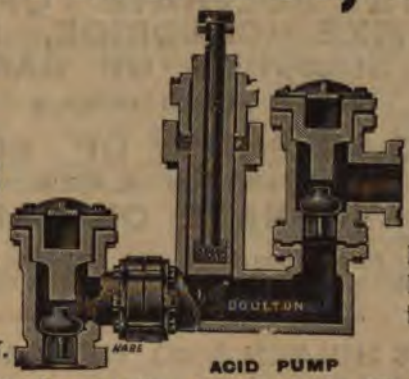

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By Order of the Board of Works for the Wandsworth District.

HENRY GEORGE HILLS,

East Hill, Wandsworth, S.W., *Clerk to the Board*,
6th January, 1899.

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AGENTS WANTED, Electro-Chemical Chimney-Cleaners. No sweeps or brushes required. Chimney cleaned at any time of day. No getting up early cold mornings Agents coining money.—Unique Manufacturing Co., Rotherham.

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FOR SALE, 6 wrought iron Stills; 2 cast iron Tanks, 5ft. by 3ft. by 3ft.; 6 Weighing Machines, by Avery, 20 cwt. to 3 cwt.; 2 Vertical 2½ in Ram Steam Pumps; 1 Vertical 3½ in. Ram Steam Pump; 1 13ft. by 5ft. Egg-ended Boiler or Receiver; 1 20ft. by 6ft. Lancashire Boiler; 1 20ft. by 7ft. Lancashire Boiler; 1 12ft. by 6ft. Vertical Boiler; 1 7-h.p., and 1 12-h.p. Gas Engines.—For particulars and prices address, J. Light, Wolverhampton.

FOR SALE, SIX COPPER CASED STEAM PANS; jacketted, flanged tops, wrought iron cases outside; size, about 3ft. 3in. by 2ft. 2in. inside; sold cheap.—Address, J. Light, Wolverhampton.

VATS, TANKS, and other WOOD VESSELS (new and second-hand) for Sale. Send particulars of requirements to Shuters, Chippendales, and Colyers, Ltd., Vat Makers, High-street, Stratford London, E.

A large quantity of SECOND-HAND BREWER'S HOGSHEADS, BARRELS, KILDERKINS, FIRKINS, and PINS always in stock.—Apply for prices, John Grout & Co., Ltd., Beck and Vat Makers and Cooper Burton-on-Trent.

WOODEN VESSELS of every description, New or Second-hand; all shapes, dimensions, and capacities. We have on hand the largest stock in England, and firms requiring anything in this direction are kindly invited to write for particulars, etc. to Henry Roberts & Co., Vat and Back Makers, Bancroft Road London

FOR SALE, large number of good Second-hand and New Wrought and Cast-Iron and Wood Tanks. All shapes and all sizes. Lists and prices on application. Enquiries solicited. Tanks of all kinds bought.—Apply, Thos. W. Ward, Fitzalan Chambers Sheffield.

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Processes and inventions can be tried by inventors or tested and reported upon.—91, Blackfriars-road, London, S.E.

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TO BE LET, ASQUITH BOTTOM DYEWORKS situate at Sowerby Bridge, near Halifax, fitted up with all modern requisites for carrying on an extensive dyeing and finishing business, including velvets and velveteens. There is an unfailing supply of pure water with every convenience for a large business. The premises are admirably roofed, and situate at a short distance from the Sowerby Bridge Railway Station. The rates are low. Such an opportunity rarely occurs, as a good tenant would be very liberally dealt with.—Apply to

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SULPHURIC ACID for SALE—B.O.V., D.O.V., and B.O.V., made from Sulphur—Enquiries solicited.—John Nicholson & Sons, Limited Leeds.

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Also Hydrate and Anhydrous Alumina, Chloride and Carbonate of Alumina, Aluminate of Soda, Hydrate of Barium, &c.

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These Ladles are manufactured by a patented process, each from a single steel plate without weld or rivet. They are extremely light, being at the same time the strongest and most durable in the market. Ladles to contain 50lb. of metal only weigh about 7lb. each. They are made of all capacities from 30lb. to 50 cwt., with or without lips; also mounted or unmounted. They are also suitable for chemical and metallurgical processes. List of sections and prices on application to
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Liverpool: Exchange Chambers. Glasgow: West Campbell-st.

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GAS COMPRESSING ENGINES.

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EXHAUST AND BLAST FANS.

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PURE CRYSTAL ALUM.

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CORRESPONDENCE SOLICITED.

SAMPLES AND PRICES ON APPLICATION.

Tender.

TO MANUFACTURING CHEMISTS AND OTHERS.

THE BOARD OF WORKS for the Wandsworth District are prepared to receive TENDERS for the SUPPLY OF CARBOLIC ACID POWDERS and OTHER DISINFECTANTS for one, two or three years at the option of the Board, from the 25th March next. The Specification and Form of Tender may be obtained at these Offices between the hours of ten and four (Saturdays, ten till two).

Tenders are to be delivered at these Offices, under seal, endorsed "Tender for Disinfectants," on or before Tuesday, the 31st day of January instant, and must contain the names and addresses of two responsible persons to join the contractor in a contract for the due execution thereof.

No Tender will be received unless it is made upon one of the printed forms issued from these offices. The Board do not pledge themselves to accept the lowest or any Tender.

By Order of the Board of Works for the Wandsworth District.

HENRY GEORGE HILLS,

East Hill, Wandsworth, S.W., *Clerk to the Board.*
6th January, 1899.

Miscellaneous.

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SULPHURIC ACID for SALE—B.O.V., D.O.V., R.O.V., free from Arsenic. Open to buy S'Oxide.—MILNSBRIDGE CHEMICAL CO. HUDDERSFIELD.

FOR SALE, five tons phosphate of potash, made by adding phosphoric acid to pearl ash; drying same slowly and grinding into powder. Contains 16 to 18 per cent. potash, and 30 to 35 per cent. phosphoric acid (P_2O_5). Will sell cheap.—Apply, "Phosphate," *Chemical Trade Journal* Office, Manchester.

MANAGER of Chemical Manure and Sulphuric Acid works seeks fresh appointment. Twenty years' experience in laboratory and works.—"M.N.," Norfolk Villa, Stanley-road, Woodford.

CHEMICAL Laboratory Assistant, with five years' experience as head assistant in a large public school laboratory, seeks engagement, home or abroad. Excellent references.—Address, "Rugbiensis," *Chemical Trade Journal* Office, Manchester.

OXALIC ACID.—Wanted, ten tons monthly, c.i.f. Antwerp.—Apply, "R.B.," *Chemical Trade Journal* Office, Manchester.

ADVERTISER (26), disengaged, seeks position as Chemist's Assistant in metallurgical or chemical works, electrolytic preferred. Good testimonials.—Address, "Sulphide," *Chemical Trade Journal* Office, Manchester.

GENTLEMAN with practical chemical experience requires position of trust with good prospects either in works or wholesale house.—Address, "London," *Chemical Trade Journal* Office, Manchester.

ON SALE, Vertical Steam Pump, Cameron's type; ram, 3½ ins. diameter; cylinder, 6 in. diameter; 5 inch stroke.—T. and R. Lees, Engineers, Hollinwood, near Manchester.

HYDRATE of BARIUM for Sale. Fine quality, very cheap. Enquiries solicited.—Petersen and Consmüller, Hamburg.

ARSENICAL RESIDUES.—Wanted to purchase, residues containing arsenic.—Please apply, with samples and prices, to H. H. Vivian and Co., Ltd., Hafod Iska Works, Swansea.

YOUNG MAN, who has had 3 years in a public analyst's Laboratory, 3 years at College, and passed the final examination for the A.I.C., desires situation in works as Chemist or Assistant-Chemist. Good references. Would go abroad.—Apply "XN," *Chemical Trade Journal* Office, Manchester.

Miscellaneous—Cont.

SOAPS, CANDLES. — Technical Manager disengaged; practical and up-to-date in all kinds and qualities. Glycerine Recovery and Refining, Wax Candles, Night Lights, Tallow Melting and Refining, and Perfumery; Chemist and Chemical Engineer.—Address, "Soap," *Chemical Trade Journal* Office, Manchester.

BERICHTE DER DEUTSCHEN GESELLSCHAFT Wanted, from 1868 to 1870 inclusive.—Address, "F.W.R.," 3, Farcliffe Place, Bradford

VATS FOR SALE.—We have Six English Oak Vats, size from 350 barrels to 450 barrels each; also two about 100 barrels each.—Particulars, Brightwells, Coopers and Dealers in Old Casks, Burton-on-Trent.

WANTED, post at home or abroad, as Manager or Chemist for tar distillation and purification of its bye-products; oxide of iron colours from tin-plate waste liquors; acids, etc. Have managed large works. Highest references.—Address, "G.S.A.," *Chemical Trade Journal* Office, Manchester.

A PRACTICAL man with twenty years' varied experience in construction of modern plant and manufacture of highest-grade chemicals, acids, alkalies, etc., desires to treat with manufacturers as to erection of plant for economical manufacture, alterations, etc., or as Manager. Terms moderate—"W.H.," 73, Steiner-street, Accrington.

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A VALUABLE WATER POWER with over 7 acres of adjoining land For Sale. The FALL has a head of over 63 feet, and is capable of developing, on an average, 3,000 H.P. It is situated near a large sea port and excellent means of transport by sea or rail are available. The owners are prepared to meet a likely purchaser with very advantageous terms, and would be willing to receive part payment of the purchase money in shares, should a really good company desire to acquire this very valuable Power. There are some large buildings on the property, which can also be acquired, and are suitable for manufacturing purposes, &c. For particulars, apply to "Power," *Chemical Trade Journal* Office, Manchester.

AGENTS WANTED, Electro-Chemical Chimney-Cleaners. No sweeps or brushes required. Chimney cleaned at any time of day. No getting up early cold mornings Agents coining money.—Unique Manufacturing Co., Rotherham.

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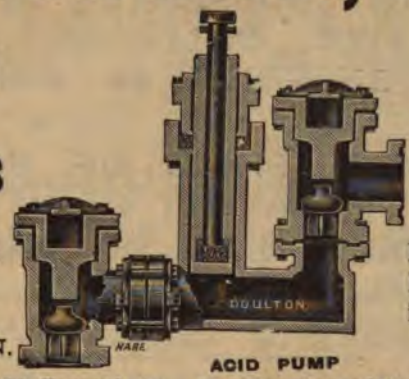

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TELEPHONE: No. 20, St. Helens.

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THE Commissioners are prepared to receive TENDERS from Manufacturers of Chemical Works Plant for the supply and equipment of Plant and Appliances for the Distillation of Ammoniacal Gas Liquor and the production of the various Compounds of Ammonia therefrom.

Full particulars can be obtained upon application to the Chief Engineer and Manager, Mr. W. R. Herring, Gasworks, Edinburgh.

Tenders to be addressed to the undersigned, and delivered at 25, Waterloo Place, Edinburgh, on or before the 25th day of March, 1899

The Commissioners do not bind themselves to accept the lowest or any Tender.

JAMES McG. JACK, Clerk.

25, Waterloo Place, Edinburgh, Feb. 11, 1899.

THE Corporation of Middleton are prepared to receive TENDERS for the supply of Disinfecting Powder for the ensuing year. Further particulars and form of tender may be obtained from Mr. C. H. Norton, Nuisance Inspector. Tenders, endorsed "Disinfecting Powder," and addressed to the Chairman of the Watch Committee, must be delivered at my office on or before the 4th March, 1899. The Corporation do not bind themselves to accept the lowest or any Tender.

FREDERICK ENTWISTLE, Town Clerk.

Town Hall, Middleton, 9th February, 1899.

Miscellaneous.

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NITRIC ACID MAKER seeks RE-ENGAGEMENT; steady, thoroughly reliable, good references.—"Nitric," *Chemical Trade Journal* Office, Manchester.

WANTED, back vols. or sets of "Chemical News," "Chemical Soc. Journal," "Nature," "Knowledge," "Philosophical Magazine," Scientific Journals and Periodicals, Natural History Works, &c.—HALL, Chapel Place, Tunbridge Wells.

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TO Brewers, Paper Makers, Manufacturers, and others. Special arrangements have been made for Analysis and Research in connection with cellulose and the general chemistry of the Carbohydrates.

Determinations of special analytical data undertaken, such as Combustions C. H. and N. (Dumas), Furfural estimations, Methoxyl, etc.

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ANALYST with general experience of Analytical work in English and German Laboratories seeks a position as Assistant in an established Analyst's Laboratory or in Works. Is F.I.C. and F.C.S., and can give good references and testimonials. London or neighbourhood preferred.—Address, "M.C." *Chemical Trade Journal* Office, Manchester.

Miscellaneous—Cont.

FOR SALE, FIVE HOT AIR DRYING OVENS, each 3ft. by 4ft 3in. by 2ft 5in and having 18 runners for trays, with air propellers and air heater; in use only two months Each oven can be worked independently — Apply to Secretary, The Mecredy Manufacturing Syndicate, Ltd, 218, Gresham House, Old Broad Street, London, E.C.

CHEMIST, Dr. (foreigner) aged 26, knowledge of German, French, and English, two years' experience in chemical laboratories in Germany, desires engagement in Works or Laboratory in England; good references.—Address, "G.A," *Chemical Trade Journal* Office, Manchester.

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WANTED, immediately, small-sized VACUUM PUMP, capable of producing full vacuum, driven by power.—Particulars and price to Scottish Cyanide Co., Ltd, Leven, N.B.

POSITION wanted as Chemist or Manager; ten years' experience with Bleach, Caustic, Vitriol Tar, and Ammonia Products; excellent references and testimonials; salary moderate — Apply, "Position," *Chemical Trade Journal* Office, Manchester.

WOOD TAR FOR SALE.—Enquiries to "Wood Tar," *Chemical Trade Journal* Office, Manchester.

PRACTICAL and Chemical Engineer seeks engagement; 15 years' experience in different Chemical Manure and Acid Works, thorough knowledge of plant, and well up in the theoretical and practical working of both branches; and the purification and concentration of sulphuric acid.—Address, "F.W.B.," 46, Wyatt Road, Forest Gate, London, E.

SITUATION wanted as Chemical Plumber and Lead Burner; thoroughly experienced; good references given.—"Lead," *Chemical Trade Journal* Office, Manchester.

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A VALUABLE WATER POWER, with over 7 acres of adjoining land For Sale. The FALL has a head of over 63 feet, and is capable of developing, on an average, 3,000 H.P. It is situated near a large sea port and excellent means of transport by sea or rail are available. The owners are prepared to meet a likely purchaser with very advantageous terms, and would be willing to receive part payment of the purchase money in shares, should a really good company desire to acquire this very valuable Power. There are some large buildings on the property, which can also be acquired, and are suitable for

BLAYDON MANURE AND ALKALI COMP.'S

PURE WHITE SULPHATE OF ALUMI

BLANC FIXE, CHLORIDE, NITRATE,

AND SULPHIDE OF BARIUM.

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PURE PRECIP. CARBONATE OF BARYTES 9

Also Hydrate and Anhydrous Alumina, Chloride and Carbonat
Alumina, Aluminate of Soda, Hydrate of Barium, &c.

Agents: JULIUS HULSEN & CO., NEWCASTLE-ON-T

36¾"
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PATENT UNBREAKABLE
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These Ladles are manufactured by a patented process, each from a single steel plate without weld or rivet. They are extremely light, being at the same time the strongest and most durable in the market. Ladles to contain 56lb. of metal only weigh about 7lb. each. They are made of all capacities from 30lb. to 50 cwt., with or without lips; also mounted or unmounted. They are also suitable for chemical and metallurgical processes. List of sections and prices on application to
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CHEMICALS, Pure and Commercial,

For Scientific and Technical Purposes.

Specialities: Ethers, Chloroform.

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WALKERS' PATENT
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GAS COMPRESSING ENGINES.
150,000 I.H.P. ALREADY AT WORK.

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PETER SPENCE & SONS,
Manchester Alum Works, Manchester; and Goole Alum Works, Goole.
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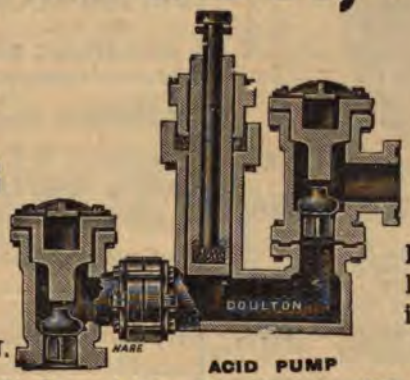
(THE PUREST BRAND OF SULPHATE OF ALUMINA).
CRYSTAL ALUM (LUMP AND GROUND).
ALSO SOLE MANUFACTURERS OF THE WELL-KNOWN **ALUMINOFERRIC.**

DOULTON & CO., LTD., LAMBETH, LONDON,
MANUFACTURERS OF
STONEWARE CHEMICAL APPARATUS
OF
EVERY DESCRIPTION.
PRICE LISTS ON APPLICATION.



ACID PUMP

IMPROVED STONEWARE ACID PUMPS.
Each Pump prior to leaving the Factory is put into actual work and tested.

SHOWROOMS: St. James's Sq., Manchester; 100, Soho St., Liverpool. Granville St., Birmingham; 38 and 40, Bothwell St., Glasgow; 6, Rue de Paradis, Paris.

SPECIALITIES:—

SODA ASH 58%	Phosphoric Acid	Castor Oil	Amidol, Metol, Glycin,
POTASHES	Acetates	Olive Oil	Thiocarbamid and other
SALTCAKE	Oxalic Acid	Essent. Oils	Photographicals,
BLEACH	Tartaric Acid	Cluoose	Lumieres,
LITHIA SALTS	Salicylic Acid	Grape Sugar	Dry Plates,
BORAX	Carbolic Acid	Cane Syrup	&c., &c.
MERCURIALS	Camphor	Treacle	
SUL. COPPER	Stearine	Nitrate of Silver (Pure)	
PRUSSIATES	Glycerine		
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CHEMICALS,
Pharmaceutical Products,
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Drysalteries and Drugs,
Also OILS and PRODUCE.
SAMPLES AND PRICES ON APPLICATION.
CORRESPONDENCE SOLICITED.

Tenders.

THE EDINBURGH & LEITH CORPORATIONS GAS COMMISSIONERS.

TO CHEMICAL PLANT MANUFACTURERS.

THE Commissioners are prepared to receive TENDERS from Manufacturers of Chemical Works Plant for the supply and equipment of Plant and Appliances for the Distillation of Ammoniacal Gas Liquor and the production of the various Compounds of Ammonia therefrom.

Full particulars can be obtained upon application to the Chief Engineer and Manager, Mr. W. R. Herring, Gas-works, Edinburgh.

Tenders to be addressed to the undersigned, and delivered at 25, Waterloo Place, Edinburgh, on or before the 25th day of March, 1899.

The Commissioners do not bind themselves to accept the lowest or any Tender.

JAMES McG. JACK, Clerk.
25, Waterloo Place, Edinburgh, Feb. 11, 1899.

THE Corporation of Middleton are prepared to receive TENDERS for the supply of Disinfecting Powder for the ensuing year. Further particulars and form of tender may be obtained from Mr. C. H. Norton, Nuisance Inspector. Tenders, endorsed "Disinfecting Powder," and addressed to the Chairman of the Watch Committee, must be delivered at my office on or before the 4th March, 1899. The Corporation do not bind themselves to accept the lowest or any Tender.

FREDERICK ENTWISTLE, Town Clerk.
Town Hall, Middleton, 9th February, 1899.

MANCHESTER CORPORATION GAS WORKS. SPENT OXIDE.—The Gas Committee of the Corporation of Manchester are prepared to receive TENDERS for the PURCHASE and REMOVAL of the SPENT OXIDE, to be produced at their Gaythorn, Rochdale-road, and Bradford-road Works respectively during a period of one year from the 31st March, 1899. The Committee do not bind themselves to accept the highest or any tender, and reserve the right to divide the tenders as they may consider advisable. Sealed tenders, addressed to the Chairman of the Gas Committee, and endorsed "Tender for Spent Oxide" must be delivered at the offices of the Gas Department, Town Hall, not later than 10 a.m. on Friday, the 3rd day of March, 1899. Forms of tender and further particulars may be obtained on application in writing to Mr. Charles Nickson, Superintendent of the Department.—By order of the Gas Committee,

WM. HENRY TALBOT, Town Clerk,
Town Hall, Manchester, 17th February, 1899.

MANCHESTER CORPORATION GAS WORKS. TAR AND AMMONIACAL LIQUOR.—The Gas Committee of the Manchester Corporation are prepared to receive TENDERS for the PURCHASE and REMOVAL of the TAR and AMMONIACAL LIQUOR to be produced at their Droylsden Station during a period of one year from the 31st March, 1899. The Committee do not bind themselves to accept the highest or any tender. Sealed tenders addressed to the Chairman of the Gas Committee and endorsed "Tender for Tar and Liquor, Droylsden," must be delivered at the offices of the Gas Department, Town Hall, on or before Tuesday, the 28th day of February, 1899. Forms of tender and further particulars may be obtained on application in writing to Mr. Charles Nickson, Superintendent of the Gas Department.—By order of the Gas Committee. WM. HENRY TALBOT, Town Clerk,
Town Hall, Manchester, 17th February, 1899.

MANCHESTER CORPORATION GAS WORKS. TO TAR DISTILLERS AND OTHERS.—The Gas Committee of the Corporation of Manchester are prepared to receive TENDERS for the PURCHASE and REMOVAL, on the sliding scale basis, of the GAS TAR to be produced at their Rochdale-road and Bradford-road Stations respectively during a period of one year, commencing from noon on the 31st March, 1899. The Committee do not bind themselves to accept the highest or any tender, and reserve the right to divide the tenders as they may consider advisable. Sealed tenders, addressed to the Chairman of the Gas Committee, and endorsed "Tender for Tar," must be delivered at the offices of the Gas Department, Town Hall, on or before Thursday, the 7th day of March, 1899. Full particulars may be obtained on application in writing to Mr. Charles Nickson, Superintendent of the Department.—By order of the Gas Committee. WM. HENRY TALBOT, Town Clerk,
Town Hall, Manchester, 17th February, 1899.

Miscellaneous.

☞ **Replies to Advertisements addressed to the "Chemical Trade Journal" Office, are forwarded to Advertisers, post free.**

SULPHURIC ACID for SALE—B.O.V., D.O.V., R.O.V., free from Arsenic. Open to buy SO Oxide.—MILLSBRIDGE CHEMICAL CO., HUDDERSFIELD.

Miscellaneous—Cont.

WANTED, 2 FILTER PRESSES, about 25 chambers each, with 18 to 20 inch plates, centre feed, with pumps for same; belt driven preferred.—Price and particulars to R. England & Co., 36, Mark Lane, London.

WANTED, practical and reliable information as to the best methods of preparing REALGAR and PARIS GREEN PAINTS from the ore. Also trade prices and requirements. — C. H. Smith, Chemical Works, Worksop.

WANTED, steady reliable man who thoroughly understands the manufacture and the testing of Benzole, Naphthas, &c; none but competent men need apply.—Address, "Box 99," *Chemical Trade Journal* Office, Manchester.

FOR SALE cheap to clear, one cast iron tank, 41ft diameter by 15ft deep; capacity, 125,000 gallons.—Apply to Samuel White and Son, 60, Queen Victoria-street, London, E.C.

CHEMIST, Dr. (foreigner) aged 26, knowledge of German, French, and English, two years' experience in chemical laboratories in Germany, desires engagement in Works or Laboratory in England; good references.—Address, "G.A.," *Chemical Trade Journal* Office, Manchester.

POSITION wanted as Chemist or Manager; ten years' experience with Bleach, Caustic, Vitriol, Tar, and Ammonia Products; excellent references and testimonials; salary moderate — Apply "Position," *Chemical Trade Journal* Office, Manchester.

WOOD TAR FOR SALE.—Enquiries to "Wood Tar," *Chemical Trade Journal* Office, Manchester.

PRACTICAL and Chemical Engineer seeks engagement; 15 years' experience in different Chemical Manure and Acid Works, thorough knowledge of plant, and well up in the theoretical and practical working of both branches; and the purification and concentration of sulphuric acid —Address, "F.W.B.," 46, Wyatt Road, Forest Gate, London, E.

WANTED.—Drying, Grinding, and Sorting Machinery for Waste Lime, in quantities of 50 tons daily —Apply, "Engineer's Dept.," J. Crosfield and Sons Ltd., Warrington.

VATS FOR SALE.—We have Six English Oak Vats, size from 350 barrels to 450 barrels each; also two about 100 barrels each —Particulars, Brightwells, Coopers and Dealers in Old Casks, Burton-on-Trent

AGENTS WANTED, Electro-Chemical Chimney-Cleaners. No sweeps or brushes required. Chimney cleaned at any time of day. No getting up early cold mornings. Agents coining money.—Unique Manufacturing Co., Rotherham.

ON SALE, Vertical Steam Pump, Cameron's type; ram, 3½ ins. diameter; cylinder, 6 in. diameter; 5 inch stroke.—T. and R. Lees, Engineers, Hollinwood, near Manchester.

FOR SALE, 6 wrought iron Stills; 6 Weighing Machines, by Avery, 20 cwt. to 3 cwt.; 2 Vertical 2½ in Ram Steam Pumps; 1 Vertical 3½ in. Ram Steam Pump; 1 13ft. by 5ft. Egg-ended Boiler or Receiver; 1 20ft. by 6ft. Lancashire Boiler; 1 20ft. by 7ft. Lancashire Boiler; 1 12ft by 6ft. Vertical Boiler; 1 7-h.p., and 1 12-h.p. Gas Engines.—For particulars and prices address, J. Light, Wolverhampton.

FIVE High-pressure cast iron jacketted Steam Pans, size 24in. by 20in.; 3 Patent Steam Kettles, with inner coil of copper, to heat water for 100 workpeople or heating stones, size 48in. by 9in.; 4 Patent Steam Hot Plates or Hearths, large size; 12 large Steam Ovens, with doors, movable shelves, and appliances, by Bailey & Co., Salford, nearly new, sold cheap.—J. *Light, Wolverhampton.*

FOR SALE, SIX COPPER CASED STEAM PANS; jacketted, flanged tops, wrought iron cases outside; size, about 2ft. 3in. by 2ft. 2in. inside; sold cheap.—Address, J. Light, Wolverhampton.

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MANUFACTURERS OF
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IN VITRIFIED STONEWARE.
ACID PANS, ACID PIPES & CONNECTIONS, RECEIVERS, CONDENSING WORMS, RETORTS, COCKS, JARS, BOTTLES & INSULATORS, BATTERY JARS, POROUS CELLS, &c., &c.
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Up to 95 %.
FLUOR SPAR,
Finest 98/99 per cent. quality.
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MANGANESE, Up to 95%
FLUOR SPAR, finest 98/99 per cent white quality.
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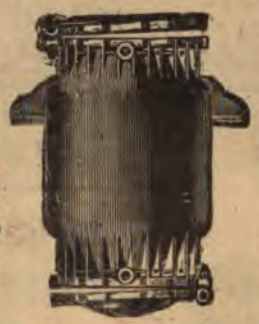
BONE STEAMER.



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Extraction of the Grease within an hour.

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Glue, Celatine, & Size Manufacturers,
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ALBUMENS, Pastes, Arabic Solution Vegetable and Animal Size, Gums, **GLUES, PREPARED PITHS,** Precipitated Bone Phosphate, Neatsfoot Oil, Greases, Manure Materials, &c.
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Especially suitable for certain materials, Wet or Dry.
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Liverpool: Exchange Chambers, Glasgow: West Campbell-st.
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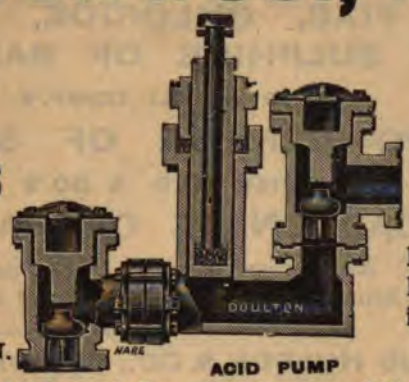

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Messrs. W. J. FRASER and CO., Engineers, 98, Commercial Road East, London, undertake Valuations of and Reports on Engineering Plant and Machinery for Company Formation, Partnership, Fire Assessment, Probate and other purposes. Drawings and Specifications prepared for New Engineering Plant on fixed charges.

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Tanks and Wrot. Ironwork

Tenders.

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POSITION wanted as Chemist or Manager; ten years' experience with Bleach, Caustic, Vitriol, Tar, and Ammonia Products; excellent references and testimonials; salary moderate.—Apply, "Position," *Chemical Trade Journal* Office, Manchester.

LABORATORY ASSISTANT (age about 18 to 20) required in chemical works. Must be careful manipulator; one with some knowledge of manures and oil cakes preferred.—State particulars to Crone and Taylor, Sutton Oak, St. Helens, Lancs.

WANTED, post at home or abroad as UNDER MANAGER or CHEMIST FOREMAN. Good experience in the manufacture of B.O.V., R.O.V., Saltcake, Bleaching Powder, Nitric Acid, etc.—Full particulars on application, "Y.99," *Chemical Trade Journal* Office, Manchester.

MODERATE SALARY.—Chemist, with 1st. class honours degree, and technical research experience desires appointment in Works or Laboratory.—Address:—"B. Sc." *Chemical Trade Journal* Office, Manchester.

NITRIC ACID MAKER seeks RE-ENGAGEMENT; steady, thoroughly reliable, good references. London or Suburbs preferred.—"Y.44," *Chemical Trade Journal* Office, Manchester.

MOLYBDENITE.—Wanted, small and large quantities,—Reply, stating quantities, tests, times of delivery, and lowest prices, to "P.19," *Chemical Trade Journal* Office, Manchester

NOTICE.

On and after March 1st next, Laboratory of Research and Analytical Chemistry, Corporation Street, Lancaster.

JOHN STEWART REMINGTON, M.R A.C. (Cirencester) F.C.S.

Assistant: CLAUDE SMITH, F.I.C., F.C.S

TO Brewers, Paper Makers, Manufacturers, and others. Special arrangements h been made for Analysis and Research in connection wit cellulose and the general chemistry of the Carbohydrates. Determinations of special analytical data undertaken such as Combustions C. H. and N. (Dumas), Furfural estimations, Methoxyl, etc.

Miscellaneous—Cont.

WOOD TAR FOR SALE.—Enquiries to "Wood Tar," *Chemical Trade Journal* Office, Manchester.

ANALYST and CHEMIST (having experience in works laboratory) required, with special knowledge of Brewers' and Aerated Water Makers' Materials. Salary, to commence, £120 per annum.—Applications stating fully engagements, age, experience, etc., in confidence to "A.C.," *Chemical Trade Journal* Office, Manchester.

VATS FOR SALE.—We have Six English Oak Vats, size from 350 barrels to 450 barrels each; also two about 100 barrels each.—Particulars, Brightwells, Coopers and Dealers in Old Casks, Burton-on-Trent.

WANTED, Analytical Chemist, to assist in management of Manufactory in Yorkshire; must have a good training, and general experience in works.—Apply, stating age, salary expected, and reference, to "Management," *Chemical Trade Journal* Office, Manchester.

WANTED, Second-hand FILTER PRESS, with washing arrangement preferred, plates about 36 inches square.—"Filter," *Chemical Trade Journal* Office, Manchester.

YORKSHIRE COLLEGE, LEEDS.

DEPARTMENT OF LEATHER INDUSTRIES. Applications will be received up to March 16th for the appointment of ASSISTANT LECTURER and DEMONSTRATOR in Leather Industries. A sound training in chemistry is essential; technical knowledge, although desirable, is not indispensable. Salary to commence at £150 a year.—Further particulars may be obtained from the Secretary of the College.

AGENTS WANTED, Electro-Chemical Chimney-Cleaners. No sweeps or brushes required. Chimney cleaned at any time of day. No getting up early cold mornings. Agents coining money.—Unique Manufacturing Co., Rotherham.

ON SALE, Vertical Steam Pump, Cameron's type; ram, 3½ ins. diameter; cylinder, 6 in. diameter; 5 inch stroke.—T. and R. Lees, Engineers, Hollinwood, near Manchester.

A VALUABLE WATER POWER, with over 7 acres of adjoining land For Sale. The FALL has a head of over 63 feet, and is capable of developing, on an average, 3,000 H.P. It is situated near a large seaport in Ireland, and excellent means of transport by sea or rail are available. There is a railway siding adjoining the property. The owners are prepared to meet a likely purchaser with very advantageous terms, and would be willing to receive part payment of the purchase money in shares, should a really good company desire to acquire this very valuable Power. There are some large buildings on the property, which can also be acquired, and are suitable for manufacturing purposes, &c. For particulars, apply to "Power," *Chemical Trade Journal* Office, Manchester.

VATS, TANKS, and other WOOD VESSELS (new and second-hand) for Sale. Send particulars of requirements to Shuters, Chippendales, and Colyers, Ltd., Vat Makers, High-street, Stratford, London, E.

A large quantity of SECOND-HAND BREWER'S HOGSHEADS, BARRELS, KILDERKINS, FIRKINS, and PINS always in stock.—Apply for prices, John Grout & Co., Ltd., Back and Vat Makers and Cooper Burton-on-Trent.

WOODEN VESSELS of every description, New or Second-hand; all shapes, dimensions, and capacities. We have on hand the largest stock in England, and firms requiring anything in this direction are kindly invited to write for particulars, etc., to Henry Roberts & Co., Vat and Back Makers, Bancroft Road London

FOR SALE, large number of good Second-hand and New Wrought and Cast-Iron and Wood Tanks. All shapes and all sizes. Lists and prices on application. Enquiries solicited. Tanks of all kinds bought.—Apply, Thos. W. Ward, Fitzalan Chambers, Sheffield.

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PURE WHITE SULPHATE OF ALUMINA, BLANC FIXE, CHLORIDE, NITRATE, AND SULPHIDE OF BARIUM.

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Especially suitable for certain materials, Wet or Dry.

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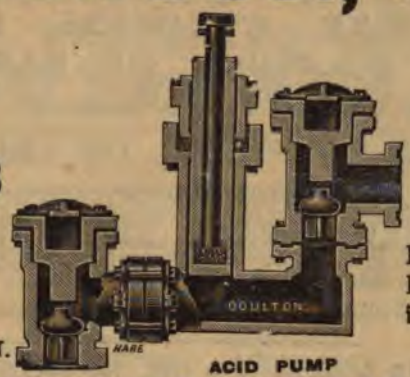

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Telephone No. 4413. Telegraph: "Fraser, Engineer, London."

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Up to 95 %.

FLUOR SPAR,

Finest 98/99 per cent. quality.

EDUARD DIEMAR, Elgersburg, Germany.

MANGANESE, Up to 95%

FLUOR SPAR, finest 98/99 per cent white quality.

WILHELM MINNER, Arnstadt, Germany.

Telegrams: "Neill," St. Helens. Telephone: No. 20, St. Helens.

CHEMICAL PLANT.

W. NEILL & SON.

SPECIALITIES:

WALL ENGINES — High or Low Speed.

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GRINDING MLS. — For all purposes.

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BLOWING ENGS. — All high efficiency.

PUMPS — Vertical and Horizontal of every description, with Improved Valves.

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GLYCERINE PLANTS.

SOAP MACHINERY.

St. Helens Junc., Lancs.

Gun Metal and Brass Work.

Tanks and Wrot. Ironwork

Tenders.

COUNTY BOROUGH OF SALFORD.

GAS DEPARTMENT.

TENDERS FOR SULPHURIC ACID.

THE GAS COMMITTEE invite tenders for the supply of about 1,400 tons of Sulphuric Acid, to be delivered during 12 months from date of acceptance of tender. Full particulars may be obtained from the Gas Engineer, Gas Offices, Bloom Street, Salford. Sealed Tenders, endorsed "Tender for Acid," addressed to the Chairman of the Gas Committee, to be delivered to me not later than 3 p.m. on Wednesday, March 29th, 1899.

By order,

Town Hall, Salford, 13th March, 1899. SAMUEL BROWN, Town Clerk.

BOROUGH of MACCLESFIELD. —The Gas Committee are prepared to RECEIVE TENDERS for the PURCHASE of the SURPLUS TAR and AMMONIACAL LIQUOR made at their works during the twelve months commencing the 1st day of May next. Tenders, for the tar or liquor separately, to be sent in not later than Saturday the 8th of April, 1899, addressed to the Chairman of the Gas Committee, Town Hall, Macclesfield, and endorsed "Tender for tar, &c." For conditions apply to Mr. Newbigging, engineer gas works, Macclesfield. The Committee reserve to themselves the right of accepting any tender for the tar or liquor separately. The highest or any tender not necessarily accepted.

March 13th, 1899. W. FREDK. TAYLOR, Town Clerk.

Miscellaneous.

☛ **Replies to Advertisements addressed to the "Chemical Trade Journal" Office, are forwarded to Advertisers, post free.**

PASTE BLUES for Paper Makers. Berlin, Paris, and Danzig. B.O.V., D.O.V., R.O.V., free from arsenic.—Milnsbridge Chemical Co., Hudders field.

ANALYTICAL CHEMIST required, having experience in Works, Laboratory, and special knowledge of Brewing Materials. Salary to commence, £120 per annum. Applications, stating fully age, experience, references, etc., in confidence to "B. M," *Chemical Trade Journal* Office, Manchester.

IMPORTANT for Vitriol Makers and Gasworks.—A Gentleman, thoroughly experienced in the working of Spent Oxide, for Cyanides, etc., wants either to build and to manage, or only to build and set on work, plant for this purpose. Large profit guaranteed.—Apply to "Gasworks," *Chemical Trade Journal* Office, Manchester.

CHEMICAL BALANCE For Sale; best offer wanted for No. 1 short beam (Oertling's) with pan supports. Cost £13 13s.; quite new, never been used.—"Balance," *Chemical Trade Journal* Office, Manchester.

ACETATE OF LIME. (Pyrolignite of Lime.)

Brown, 65-67 %

is manufactured on a large scale, and sold direct to consumers at a moderate price, by STORA KOPPARBERGS BERGSLAGS AKTIEBOLAG FALUN (SWEDEN).

FOR SALE.—Two Tubular Boilers (Babcock Pattern), four sets of coolers (jacketed pipes), one large and six small Pulsometers, six small Centrifugal Pumps, nine 2¼ in. Hydraulic Coils suitable for steam boiling.—Apply, "Carbonic," Lea Bridge, Clapton, London.

OFFERS WANTED for regular supplies of ZINC ASHES.—Apply, John Cochrane Graham Street, Leith.

WANTED, about £5,000 to £6,000 to form a concern for carrying on the manufacture of some special Chemical Articles, which are in good demand. Leaves about 50 to 60 per cent. of net profit.—Apply to "Concern," *Chemical Trade Journal* Office, Manchester.

Miscellaneous—Cont.

WANTED, a Thoroughly Competent MANAGER, to take charge of ferric oxide works.—Address, with full particulars as to former experience, and salary required, to "Ferric," *Chemical Trade Journal* Office, Mancheste

GERMAN CHEMIST, experienced in Varnishes, Manures, and Sulphuric Acid Manufacture; independent quick Analyst; late Assistant to Prof. Fresenius, Wiesbaden, desires Situation in England for 1st April or later. Moderate salary. Good testimonials.—Address, "F.F.," *Chemical Trade Journal* Office, Manchester.

LARGE LABORATORY TO LET in London, completely fitted. Premises adjoining with steam power, plant and apparatus for testing laboratory processes and inventions on a commercial scale.—Address, "Experiment," *Chemical Trade Journal* Office, Manchester.

WANTED, Situation in Works as Chemist, by young man A.I.C.; had 3 years' experience in a public analyst's laboratory, and 3 years at college. good references; would go abroad.—"Z.14," *Chemical Trade Journal* Office, Manchester.

NOTICE.
On and after March 1st next.
Laboratory of Research and Analytical Chemistry, Corporation Street, Lancaster.

JOHN STEWART REMINGTON, M.R.A.C. (Cirencester), F.C.S.
Assistant: CLAUDE SMITH, F.I.C., F.C.S

TO Brewers, Paper Makers, Manufacturers, and others. Special arrangements have been made for Analysis and Research in connection with cellulose and the general chemistry of the Carbohydrates.
Determinations of special analytical data undertaken, such as Combustions C. H. and N. (Dumas), Furfural estimations, Methoxyl, etc.

WANTED, post at home or abroad as UNDER MANAGER or CHEMIST FOREMAN. Good experience in the manufacture of B.O.V., R.O.V., Saltcake, Bleaching Powder, Nitric Acid, etc.—Full particulars on application, "Y.99," *Chemical Trade Journal* Office, Manchester.

A German Gentleman, with many years' experience in the Chemical trade, and extended acquaintances in the English and Foreign Chemical and Paper-maker's trade, wants Situation as TRAVELLER for England, Germany, the Colonies, etc. Good knowledge of languages.—Apply to "Trade," *Chemical Trade Journal* Office, Manchester.

To Chemical and Manure Manufacturers, Engineers Machinery Users, and others.
Victoria Docks.—Sale of the remaining Plant and Machinery, situate at Messrs. James Gibbs and Co.'s Upper Works North Woolwich-road, London.

MESSRS. GREEN and SON are instructed by the Directors to SELL by AUCTION, in lots, on the Premises, Upper Works, North Woolwich-road, on Monday next, March 20th inst., at 1 o'clock precisely the remaining CHEMICAL PLANT, Machinery, and other matters belonging to Messrs. James Gibbs and Co., Limited. and comprising
Manure plant:—
Alum cake plant, including wrought-iron calcining cylinder, 54ft. long with furnace;
Phosphate mill plant, including eight pairs of 4ft. 6in. mill stones, complete with gear, Blake Marsden stone crusher, four Mumford and Moodie's separators;
The acid plant, comprising two sets of pyrites kilns, with 50 furnace-fronts, fitted complete, with doors, bars, &c., acid eggs, &c.
The steam power includes a splendid 200 h.-p steam engine with high and low-pressure cylinders, and eight C. 1 surface condensers by Simpson and Co, a double-cylinder tandem air compressor, and two small engines, six Cornish boilers, 6ft. dia. by 28 feet long, about 500ft of shafting, with pulleys, riggers, and belting;
A 40-TON CHAMBER ACID TANK BARGE,
with lead-lined compartments. fore and aft; three-ton crane, a four-ton weigh ridge, and two three-ton ditto; about 1 000ft of tram lines, and about 300 iron columns, each 18ft. to 25ft. long, forge, sundry utensils, tools, two useful vans, office furniture, &c.
May be viewed on the Friday and Saturday prior to the Sale. Catalogues of Messrs. Linklater, Addison, Brown, and Jones, Solicitors, 2, Bond court, Walbrook, E.C.; on the premises; and of Messrs. Green and Son, Auctioneers and Surveyors, 23 and 29, St. Swithin's-lane, E.C.

AN ANALYTICAL CHEMIST *Wanted, for Mines in Central America.*—Reply, *Santa Francisca Gold Mines, Ltd., London & South-Western Bank Buildings, Small Street, Bristol.*

BLAYDON MANURE AND ALKALI COMP.'S
PURE WHITE SULPHATE OF ALUMINA, BLANC FIXE, CHLORIDE, NITRATE, AND SULPHIDE OF BARIUM.
UNITED ALKALI COMP.'S
HYPO-SULPHITE OF SODA,
WALTHER FELD & CO.'S
PURE PRECIP. CARBONATE OF BARYTES 96/98%
Also Hydrate and Anhydrous Alumina, Chloride and Carbonate of Alumina, Aluminate of Soda, Hydrate of Barium, &c.
Agents: JULIUS HULSEN & CO., NEWCASTLE-ON-TYNE

36¾"
McNEIL'S PATENT UNBREAKABLE STEEL LADLES
These Ladles are manufactured by a patented process, each from a single steel plate without weld or rivet. They are extremely light, being at the same time the strongest and most durable in the market. Ladles to contain 56lb. of metal only weigh about 7lb. each. They are made of all capacities from 30lb. to 50 cwt., with or without lips; also mounted or unmounted. They are also suitable for chemical and metallurgical processes. List of sections and prices on application to
CHAS. McNEIL, Jr.
KINNING PARK IRON WORKS, GLASGOW.
31"
32"

CHEMICALS, Pure and Commercial,
For Scientific and Technical Purposes.
Specialities: **Ethers, Chloroform.**
POLGLASE & CO Tyne Vale Chemical Works, Skinnerburn-rd., Newcastle-on-Tyne

MANURE & CEMENT PLANT
Grinding and Crushing Machinery
VICKERS' MIXERS.
PRATCHITT BROTHERS, Carlisle.

SAML., MEGGITT & SONS, LTD.,
Glue, Gelatine, & Size Manufacturers,
SUTTON-IN-ASHFIELD, NOTTS.
(Late BINDLEY & SON, Ltd., SMETHWICK.)

ALBUMENS, Pastes, Arabic Solution Vegetable and Animal Size, Gums, GLUES, PREPARED PITHS, Precipitated Bone Phosphate, Neatsfoot Oil, Greases, Manure Materials, &c.
W. KING, Benson St., LIVERPOOL.

BRYAN CORCORAN, LTD.
MILLSTONE BUILDER,
WIRE WEAVER, MACHINE MANUFACTURER AND GENERAL MILL FURNISHER.
Sole Maker of MILBURN'S Patent Conoidal Stone Grinding Mills
Especially suitable for certain materials, Wet or Dry.
Works and Warehouses:
Back Church Lane. *Parcel Dept.:* Basement of the Corn Exchange
31, MARK LANE, LONDON.

CANNINGTON, SHAW & CO., LIMITED,
CARBOYS.
SHERDLEY GLASSWORKS, ST. HELENS.
Liverpool: Exchange Chambers. Glasgow: West Campbell-st.
Manchester: Oldham Road. London: Worship Street, E.C.

WALKER BROS.,

ENGINEERS, PAGEFIELD IRONWORKS,

WIGAN.

WALKERS' PATENT

AIR COMPRESSING ENGINES.

GAS COMPRESSING ENGINES.

150,000 I.H.P. ALREADY AT WORK.

WALKERS' PATENT

EXHAUST AND BLAST FANS.

PETER SPENCE & SONS,

Manchester Alum Works, Manchester; and Goole Alum Works, Goole.

SOLE MANUFACTURERS OF

SULPHALUMINE

(THE PUREST BRAND OF SULPHATE OF ALUMINA).

CRYSTAL ALUM (LUMP AND GROUND).

ALSO SOLE MANUFACTURERS OF THE WELL-KNOWN **ALUMINOFERRIC.**

THE "ARCHIMEDEAN"

STERILIZER . . .

AND

. . EMULSIFIER

The Illustration represents an improved type of Machine adapted for mixtures in the manufacture of **Emulsions, &c.**, also for **Milk Sterilizing,** as recommended by the Medical Profession,—especially for Infants and Invalids.

The Machine is fitted with our patent Stirring Apparatus to work by hand. All inside parts being coated with Pure Tin. Underneath the pan is fitted a "Bunsen" Gas Generator for heating.

For Prices and Particulars apply to

THE ARCHIMEDEAN CO.,

69, LEAM TERRACE EAST,

LEAMINGTON, Warwickshire.

SPECIALITIES:—

SODA ASH 58% · POTASHES · SALTCAKE · BLEACH · LITHIA SALTS · BORAX · MERCURIALS · SUL. COPPER · PRUSSIATES · CYANIDES · METALS · MINERALS · BRIMSTONE · SULPHUR

Phosphoric Acid · Acetates · Oxalic Acid · Tartaric Acid · Salicylic Acid · Carbolic Acid · Camphor · Stearine · Glycerine · OLEINE

Castor Oil · Olive Oil · Essent. Oils · Glucose · Grape Sugar · Cane Syrup · Treacle · Nitrate of Silver (Pure)

Amidol, Metol, Glycin, Thiocarbamid and other Photographicals, Lumieres, Dry Plates, &c., &c.

IMPORTERS—Commission Merchants—EXPORTERS.

Telephone No. 1050.

Telegrams—"FUERST, LONDON."

FUERST BROS.,

LONDON: 17, Philpot Lane, E.C.

HEADQUARTERS FOR ALL HEAVY OR FINE

CHEMICALS,

Pharmaceutical Products,

Photographic Developers,

Drysalteries and Drugs,

Also OILS and PRODUCE.

CORRESPONDENCE SOLICITED.

SAMPLES AND PRICES ON APPLICATION.

Tenders.

URBAN DISTRICT COUNCIL OF BUXTON.

CONTRACT FOR TAR AND LIQUOR.

THE Urban District Council invite TENDERS for the purchase of the TAR and AMMONIACAL LIQUOR produced at their Works in Ashwood Dale, during one or more years.

Particulars to be obtained of Mr. Geo. Smedley, Gas Department, Town Hall, Buxton.

The Council do not guarantee to accept the highest or any tender.

Tenders, endorsed "Tender for Tar, &c.," to be addressed to the Chairman of the Gas Committee, and sent in not later than noon, 29th of April, next.

By order,

JOSIAH TAYLOR
Clerk to the Council

Buxton, April 19, 1899.

Miscellaneous.

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PASTE BLUES for Paper Makers. Berlin, Paris, and Danzig. B.O.V., D.O.V., R.O.V., free from arsenic.—Milnsbridge Chemical Co., Huddersfield.

WELDON APPARATUS, second-hand, wanted, in thoroughly good working orde and condition.—"Box 3,756 ' Sell's Advertising Offices Fleet Street, London, E.C.

WANTED, a PLUMBER to erect Vitriol Chambers abroad who understands making Sulphuric Acid Apply by letter, stating age, experience, and wages required, with copies of testimonials as to ability and sobriety.—Write "Vitriol," c/o Abbott's, 32, Eastcheap, London, E.C.

ESTABLISHED American House wants to correspond with producers (strictly first hands) upon Lump and Powdered Rotten Stone, Gum Sandrach, Arabic, Tragacanth, Stic-Lac, Gamboge, Benzoin, Seed Lac, etc.—Address, "American," *Oil and Colourman's Journal*, 19, Ludgate Hill, London, E.C.

PICRIC ACID. — Most improved newest method, with plans and full informations, offered for Sale.—Enquiries to "Specialist," c/o *Chemical Trade Journal* Office, Manchester.

ALLEPO AND JAPAN GALLS (best quality). About 10 tons offered promptly, at very cheap rate.—Apply to "Immediate," c/o *Chemical Trade Journal* Office, Manchester.

TANNIN AND GALLIC ACID.—Best process in practical use offered by competent experienced chemist; starting of plant accepted.—Write to "F.C.S.," c/o *Chemical Trade Journal* Office, Manchester.

WANTED, position as CHEMIST or MANAGER; good practical experience in Rectified Vitriol, Hydrochloric, Nitric Acids, pure; Epsom and Glauber Salts, Tin, Zinc, and Iron Salts, Bleach, Oleine Oil, &c.; moderate salary. — "Moderate," *Chemical Trade Journal* Office, Manchester.

CHEMIST Wanted for Tar and Ammonia Works in South of England; moderate salary.—Apply, with particulars as to experience, age, and salary required, to "Tar," *Chemical Trade Journal* Office, Manchester.

FILTER PRESS.—Wanted, second-hand press in good working order, preferably Dehne's make, with square plates; price and full particulars to Thomas & Green, Ltd., Wooburn, Wooburn Green.

MARKET CLERK Wanted, by old-established, first-class firm in the Chemical Manure trade; must have had considerable experience in Sulphates, Nitrates, and Phosphates. Liberal share of profits given to a really first rate man. Applications will be treated confidentially. — Reply, "S.M.," Chemical Trade Journal Office, Manchester.

Miscellaneous—Cont.

FOREMAN Wanted, for a Manure Works in Ireland, one who has a knowledge of acid and manure manufacture.—Apply, with references, stating age, and salary expected, to "A," *Chemical Trade Journal* Office, Manchester.

ARTIFICIAL GUM ARABIC.—For Sale, a New Method of producing this in a cheap and simple manner, in any quality and quantity.—Dr. Klimsch, Tangermünde, Germany.

WANTED, an Expert in the Manufacture of Glue from Bones, to erect Plant, and instruct in working same —Address, "Bone," *Chemical Trade Journal* Office, Manchester.

RE-ENGAGEMENT Wanted as Manager of a Gunpowder Factory; thorough practical experience in the manufacture of Smokeless Powders.—Address, "Poudre," c/o Messrs. Street & Co., 30, Cornhill, London, E.C.

FOR SALE, Four good, second-hand Boiler Tanks, 22 ft. by 9 ft.—capacity about 8,500 gallons each. Seven ditto, 22 ft. by 8 ft.—about 6,600 gallons. One ditto, 19 ft. by 9 ft. 3 in.—about 7 500 gallons Various other sizes in stock.—Apply, Thomas W. Ward, Fitzalan Chambers, Sheffield.

FOR SALE, quick delivery, three new Cylindrical ACID TANK TRUCKS, tank 15 ft. long by 4 ft. 1½ in. diameter. Also one TANK 15 ft. long by 3 ft. 2 in. diameter.—Apply, C. Roberts & Co., Ltd., Railway Wagon and General Works, Horbury Junction, near Wakefield.

TO CHEMICAL Manufacturers and OTHERS.—For Sale, cheap, and equal to new, one Galvanized Wrot. Iron WATER CARRIER or TROUGH, 700ft. long, 23in. wide, 12in. deep, in segments 9ft. long. Also one Cast Iron ditto, about 200ft. long, 16in. wide, 12in. deep, in segments of 9ft.—Apply, Shaw & Gaskell, Hull.

FOR SALE, SIX COPPER CASED STEAM PANS; jacketted, flanged tops, wrought iron cases outside; size, about 3ft. 2in. by 2ft. 2in. inside; sold cheap; several Weighing Machines, by Avery; three Vertical Wall Pumps, 1¾in. to 2½in. rams; one 3½in. ram Vertical Steam Pump, by Turner; three 9ft. by 4ft. new Vertical Steam Boilers; one 24ft. by 7ft. double rivetted Lancashire Boiler; one 20ft. by 6ft. Lancashire Boiler; four Compound Steam Engines, cylinders 7in and 11in. by 8in — 8½in. and 12in. by 8in. inverted, 11in. and 20in. by 24in. and 12½in. and 22in. by 26in. horizontal; one 8in. by 18in. stroke new Horizontal Engine; four Gas Engines, 2, 5, 7, and 12 h.p.; two cast iron high pressure Jacketted Steam Pans, 24in. wide, 20in. deep, nearly new; one 18in. by 36in. Inverted Engine and Galloway Boiler; several Air and Gas Compressors; four Steel Receivers, 36ft. by 2ft. 6in. diam. —For full details, address, J. Light, Wolverhampton.

VATS FOR SALE.—We have Six English Oak Vats, size from 350 barrels to 450 barrels each; also two about 100 barrels each —Particulars, Brightwells, Coopers and Dealers in Old Casks, Burton-on-Trent.

ON SALE, Vertical Steam Pump, Cameron's type; ram, 3½ ins. diameter; cylinder, 6 in. diameter; 5 inch stroke.—T. and R. Lees, Engineers, Hollinwood, near Manchester.

VATS, TANKS, and other WOOD VESSELS (new and second-hand) for Sale. Send particulars of requirements to Shuters, Chippendales, and Colyers, Ltd., Vat Makers, High-street, Stratford, London, E.

A large quantity of SECOND-HAND BREWER'S HOGSHEADS, BARRELS, KILDERKINS, FIRKINS, and PINS always in stock.—Apply for prices, John Grout & Co., Ltd., Back and Vat Makers and Cooper Burton-on-Trent.

WOODEN VESSELS of every description, New or Second-hand; all shapes, dimensions, and capacities. We have on hand the largest stock in England, and firms requiring anything in this direction are kindly invited to write for particulars, etc., to Henry Roberts & Co., Vat and Back Makers, Bancroft Road, Mile End, London, E.

FOR SALE, large number of good *Second-hand and New Wrought* and Cast-Iron and *Wood Tanks. All shapes and all sizes. Lists and prices on application. Enquiries solicited. Tanks of all kinds bought.—Apply, Thos. W. Ward, Fitzalan Chambers, Sheffield.*

J. STIFF & SONS,
MANUFACTURERS OF
CHEMICAL APPARATUS
IN VITRIFIED STONEWARE.
ACID PANS, ACID PIPES & CONNECTIONS, RECEIVERS, CONDENSING WORMS, RETORTS, COCKS, JARS, BOTTLES & INSULATORS, BATTERY JARS, POROUS CELLS, &c., &c.
LAMBETH, LONDON, S.E.

MANGANESE
Up to 95 %.
FLUOR SPAR,
Finest 98/99 per cent. quality.
EDUARD DIEMAR, Elgersburg, Germany.

MANGANESE, Up to 95%
FLUOR SPAR, finest 98/99 per cent white quality.
WILHELM MINNER, Arnstadt, Germany.

FULLER'S
BONE STEAMER.
Softens the Bones without extracting any of the Nitrogenous Substance.

Extraction of the Grease within an hour.
ESTIMATES FOR COMPLETE
BONE STEAMING AND GRINDING PLANT.
GRINDING MACHINERY
FOR EVERY DESCRIPTION OF MATERIAL.
W. M. FULLER, Jun.,
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MANGANESE
AND
FLUOR SPAR
of all kinds supplied by
CHR. GOTTL. FOERSTER, Ilmenau, Germany.

SAML., MEGGITT & SONS, LTD.,
Glue, Gelatine, & Size Manufacturers,
SUTTON-IN-ASHFIELD, NOTTS.
(Late BINDLEY & SON, Ltd., SMETHWICK.)

ALBUMENS, Pastes, Arabic Solution Vegetable and Animal Size, Gums, **GLUES, PREPARED PITHS,** Precipitated Bone Phosphate, Neatsfoot Oil, Greases, Manure Materials, &c.
W. KING, Benson St., LIVERPOOL.

MANURE & CEMENT PLANT
Grinding and Crushing Machinery.
VICKERS' MIXERS.
PRATCHITT BROTHERS, Carlisle.

BRYAN CORCORAN, LTD.
MILLSTONE BUILDER,
WIRE WEAVER, MACHINE MANUFACTURER AND GENERAL MILL FURNISHER.
Sole Maker of MILBURN'S Patent Conoidal Stone Grinding Mills.
Especially suitable for certain materials, Wet or Dry.

Works and Warehouses:
Back Church Lane. *Parcel Dept.:* Basement of the Corn Exchange
31, MARK LANE, LONDON.

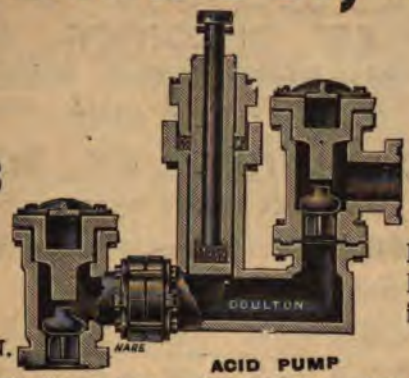
CANNINGTON, SHAW & CO., LIMITED,
CARBOYS.
Liverpool: Exchange Chambers. Glasgow: West Campbell-st.
SHERDLEY GLASSWORKS, ST. HELENS
Manchester: Exchange Road

DOULTON & CO., LTD., LAMBETH, LONDON,

MANUFACTURERS OF

STONEWARE CHEMICAL APPARATUS OF EVERY DESCRIPTION.

PRICE LISTS ON APPLICATION.



ACID PUMP

IMPROVED STONEWARE ACID PUMPS.

Each Pump prior to leaving the Factory is put into actual work and tested.

SHOWROOMS: St. James's Sq., Manchester; 100, Soho St., Liverpool. Granville St., Birmingham; 38 and 40, Bothwell St., Glasgow; 6, Rue de Paradis, Paris.

PETER SPENCE & SONS,

Manchester Alum Works, Manchester; and Coole Alum Works, Coole.

SOLE MANUFACTURERS OF

SULPHALUMINE

(THE PUREST BRAND OF SULPHATE OF ALUMINA).

CRYSTAL ALUM (LUMP AND GROUND),

ALSO SOLE MANUFACTURERS OF THE WELL-KNOWN ALUMINOFERRIC.

VALUATIONS.

Messrs. W. J. FRASER and CO., Engineers, 98, Commercial Road East, London, undertake Valuations of and Reports on Engineering Plant and Machinery for Company Formation, Partnership, Fire Assessment, Probate and other purposes. Drawings and Specifications prepared for New Engineering Plant on fixed charges.

Telephone No. 4413. Telegraph: "FRASER, ENGINEER, LONDON."

MANGANESE

Up to 95 %.

FLUOR SPAR,

Finest 98/99 per cent. quality.

RICHARD DIEMAR, Elgersburg, Germany.

MANGANESE, Up to 95%

FLUOR SPAR, finest 98/99 per cent white quality.

WILHELM MINNER, Arnstadt, Germany.

TELEGRAMS: "Neill," St. Helens.

TELEPHONE: No. 20, St. Helens.

CHEMICAL PLANT.

W. NEILL & SON.

SPECIALITIES:

WALL ENGINES — High or Low Speed.

DRIVING ENGS.

GRINDING MLS. — For all purposes.

FILTER PRESSES — Castings. Burner Fronts, etc.

All high efficiency.

BLOWING ENGS — PUMPS — AIR COMPRESSRS. — Vertical and Horizontal of every description, with Improved Valves.

GLYCERINE PLANTS.

SOAP MACHINERY.

St. Helens Junc., Lancs.

Metal and Iron Work.

Tanks and Wrot. Ironwork

Tenders.

COUNTY BOROUGH OF HUDDERSFIELD.

PROTO-SULPHATE OF IRON.

THE Corporation of Huddersfield invite TENDERS for the supply of Commercial GREEN VITRIOL for the Sewage Disposal Works, Deighton.

Forms of Tender, &c., may be obtained on application at the offices of Mr. K. F. Campbell, A.M. Inst. C.E., Borough Engineer and Surveyor.

Sealed Tenders, endorsed "Tender for Green Vitriol," must be delivered free of charge, addressed in the handwriting of the Tenderer or his Agent, to the Town Clerk, Town Hall, Huddersfield, not later than Tuesday, the 9th proximo.

The Corporation do not bind themselves to accept the lowest or any Tender.

By Order,
F. C. LLOYD,
Town Clerk.

Town Hall, Huddersfield,
25th April, 1899.

Miscellaneous.

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PRACTICAL Working Foreman wants Situation as OLEINE MAKER. 20 years' practical experience in Nitro-Benzol, Nitro-Toluol, Bi-Nitros, Mirbane Oil, Aniline Toluidene, Para Toluidene, Aniline Salt; good references, moderate salary.—Address, "Oleine," *Chemical Trade Journal* Office, Manchester.

ANALYTICAL CHEMIST desires RE-ENGAGEMENT in Works Laboratory; accurate analyst, good experience.—Address, "C.M., *Chemical Trade Journal* Office, Manchester.

WANTED, DETAILS.—Manufacture of Ammonium Chloride from Sulphate.—"Chloride," *Chemical Trade Journal* Office, Manchester.

WANTED, position as CHEMIST or MANAGER; good practical experience in Rectified Vitriol, Hydrochloric, Nitric Acids, pure; Epsom and Glauber Salts, Tin, Zinc, and Iron Salts, Bleach, Oleine Oil, &c.,; moderate salary.—"Moderate," *Chemical Trade Journal* Office, Manchester.

MARKET CLERK Wanted, by old-established, first-class firm in the Chemical Manure trade; must have had considerable experience in Sulphates, Nitrates, and Phosphates. Liberal share of profits given to a really first rate man. Applications will be treated confidentially.—Reply, "S.N.," *Chemical Trade Journal* Office, Manchester.

GERMAN GENTLEMAN, who has studied Chemistry for 2 years at Munich University, desires to obtain a post in a firm of Manufacturing Chemists in London, with view ultimately to responsible position; moderate salary to commence; thorough knowledge of English and French.—Reply, "S.S.," 23, Crowther Road, South Norwood, London, S.E.

WORKS FOR SALE.

ESTABLISHED OVER FORTY YEARS.

THE Owner of a WOOD CARBONIZING WORKS is desirous of retiring from business, and offers Land, Works, and Valuable Patents.

There are nearly 16,000 square yards of Land, of which nearly 9,000 are freehold, and the remainder held on small small chief, nearly all of which could be utilised for building purposes without interfering with the manufacturing business.

Two good streets run up to the land, which is just outside the Corporation boundary, and is fenced all round.

The Works are drained to the satisfaction of the Urban District Council, and are situated within easy distance of several railway stations (goods), and are inside the collecting area.

A good Dwelling-house and Three Cottages, and an unlimited supply of good water, free.

Address, "Retort," c/o Davis Bros., 32, Blackfriars Street, Manchester.

Miscellaneous—Cont.

BI-SULPHITE of LIME.—Apparatus for manufacturing same FOR SALE, never been used.—Apply, "Bi-Sul.," *Chemical Trade Journal* Office, Manchester.

A PRIVATE FIRM of Sulphate Makers are desirous of making Contracts with Gas Companies for the purchase of the whole or part of their Ammoniacal Liquor.—Those Companies having any for disposal, either now or in the future, kindly communicate with "Liquor," *Chemical Trade Journal* Office, Manchester.

AIR COMPRESSOR Wanted, air cylinder about 5in. stroke, 6in. with all fittings, steam or belt driven. ACID EGG, capacity about 80 to 90 cubic feet, sound, with all connections.—Apply, "Compressor," *Chemical Trade Journal* Office, Manchester.

ARTIFICIAL GUM ARABIC.—For Sale, a New Method of producing this in a cheap and simple manner, in any quality and quantity.—Dr. Klimsch, Tangermünde, Germany.

WANTED, an Expert in the Manufacture of Glue from Bones, to erect Plant, and instruct in working same.—Address, "Bone," *Chemical Trade Journal* Office, Manchester.

FOR SALE, Four good, second-hand Boiler Tanks, 22 ft. by 9 ft.—capacity about 8,500 gallons each. Seven ditto, 22 ft. by 8 ft.—about 6,600 gallons. One ditto 19 ft. by 9 ft. 3 in.—about 7 500 gallons Various other sizes in stock.—Apply, Thomas W. Ward, Fitzalan Chambers, Sheffield.

FOR SALE, quick delivery, three new Cylindrical ACID TANK TRUCKS, tank 15 ft. long by 4 ft. 1¼ in. diameter. Also one TANK 15 ft. long by 3 ft. 2 in. diameter.—Apply, C. Roberts & Co., Ltd., Railway Wagon and General Works, Horbury Junction, near Wakefield.

TO CHEMICAL Manufacturers and OTHERS.—For Sale, cheap, and equal to new, one Galvanized Wrot. Iron WATER CARRIER or TROUGH, 700ft. long, 23in. wide, 12in. deep, in segments 9ft. long. Also one Cast Iron ditto, about 220ft long, 16in. wide, 12in. deep, in segments of 9ft.—Apply, Shaw & Gaskell, Hull.

FOR SALE, SIX COPPER CASED STEAM PANS; jacketted, flanged tops, wrought iron cases outside; size, about 3ft. 2in. by 2ft. 2in. inside; sold cheap; several Weighing Machines, by Avery; three Vertical Wall Pumps, 1¾in. to 2½in. rams; one 3½in. ram Vertical Steam Pump, by Turner; three 9ft. by 4ft. new Vertical Steam Boilers; one 24ft by 7ft. double rivetted Lancashire Boiler; one 20ft. by 6ft. Lancashire Boiler; four Compound Steam Engines, cylinders 7in and 1 in. by 8in — 8½in. and 12in by 8in. inverted, 11in. and 20in. by 24in. and 12½in. and 22in. by 20in. horizontal; one 8in. by 18in. stroke new Horizontal Engine; four Gas Engines, 2, 5, 7, and 12 h.p.; two cast iron high pressure Jacketted Steam Pans, 24in. wide, 20in. deep, nearly new; one 18in. by 36in. Inverted Engine and Galloway Boiler; several Air and Gas Compressors; four Steel Receivers, 36ft. by 2ft. 6in. diam. —For full details, address, J. Light, Wolverhampton.

VATS FOR SALE.—We have Six English Oak Vats, size from 350 barrels to 450 barrels each; also two about 100 barrels each.—Particulars, Brightwells, Coopers and Dealers in Old Casks, Burton-on-Trent

ON SALE, Vertical Steam Pump, Cameron's type; ram, 3⅜ ins. diameter; cylinder, 6 in. diameter; 5 inch stroke.—T. and R. Lees, Engineers, Hollinwood, near Manchester.

VATS, TANKS, and other WOOD VESSELS (new and second-hand) for Sale. Send particulars of requirements to Shuters, Chippendales, and Colyers, Ltd., Vat Makers, High-street, Stratford, London, E.

A large quantity of SECOND-HAND BREWER'S HOGSHEADS, BARRELS, KILDERKINS, FIRKINS, and PINS always in stock.—Apply for prices, John Grout & Co., Ltd., Back and Vat Makers and Cooper Burton-on-Trent.

WOODEN VESSELS of every description, New or Second-hand; all shapes, dimensions, and capacities. We have on hand the largest stock in England, and firms requiring anything in this *direction are kindly invited to write* for particulars, etc., *to Henry Roberts & Co., Vat and Back Makers, Bancroft Road, Mile End, London, E.*

BLAYDON MANURE AND ALKALI COMP.'S

PURE WHITE SULPHATE OF ALUMINA, BLANC FIXE, CHLORIDE, NITRATE, AND SULPHIDE OF BARIUM.

UNITED ALKALI COMP.'S

HYPO-SULPHITE OF SODA,

WALTHER FELD & CO.'S

PURE PRECIP. CARBONATE OF BARYTES 96/98%

Also Hydrate and Anhydrous Alumina, Chloride and Carbonate of Alumina, Aluminate of Soda, Hydrate of Barium, &c.

Agents: JULIUS HULSEN & CO., NEWCASTLE-ON-TYNE

GLUE.

Fine, Scotch, Town, Medal,

AND OTHER GLUES.

GELATINE, SIZE, GREASE & MANURE.

The GROVE CHEMICAL CO., Ld., Crown Works, APPLEY BRIDGE, WIGAN, LANCS.

CHEMICALS, Pure and Commercial,

For Scientific and Technical Purposes.

Specialities: **Ethers, Chloroform.**

POLGLASE & CO Tyne Vale Chemical Works, Skinnerburn-rd., Newcastle-on-Tyne

ALL SIZES OF CARBOYS KEPT & KINDS & HAMPERS IN STOCK.

Ground Stoppered Carboys Supplied.

SAML., MEGGITT & SONS, LTD.,

Glue, Gelatine, & Size Manufacturers,

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(Late BINDLEY & SON, Ltd., SMETHWICK.)

ALBUMENS, Pastes, Arabic Solution Vegetable and Animal Size, Gums, GLUES, PREPARED PITHS, Precipitated Bone Phosphate, Neatsfoot Oil, Greases, Manure Materials, &c.

W. KING, Benson St., LIVERPOOL.

THE LANCASTER Steam Traps REGISTERED TRADE MARK

THE "LANCASTER" Piston REGISTERED TRADE MARK

Always sent on Approval.

LANCASTER & TONGE, Ltd., PENDLETON.

BRYAN CORCORAN, LTD.

MILLSTONE BUILDER,
WIRE WEAVER, MACHINE MANUFACTURER AND GENERAL MILL FURNISHER.
Sole Maker of MILBURN'S Patent Conoidal Stone Grinding Mills.
Especially suitable for certain materials, Wet or Dry.
Works and Warehouses:
Back Church Lane. *Parcel Dept.:* Basement of the Corn Exchange
31, MARK LANE, LONDON.

Liverpool: Exchange Chambers, Glasgow: West Campbell-st.

CANNINGTON, SHAW & CO., LIMITED,

CARBOYS,

SHERDLEY GLASSWORKS, ST. HELENS.

Manchester: Oldham Road, London: Worship Street, E.C.

WALKER BROS.,

GINEERS, PAGEFIELD IRONWORKS,

WIGAN.

WALKERS' PATENT

IR COMPRESSING ENGINES.

AS COMPRESSING ENGINES.

150,000 I.H.P. ALREADY AT WORK.

WALKERS' PATENT

KHAUST AND BLAST FANS.

PETER SPENCE & SONS,

chester Alum Works, Manchester; and Coole Alum Works, Coole.

SOLE MANUFACTURERS OF

SULPHALUMINE

(THE PUREST BRAND OF SULPHATE OF ALUMINA).

CRYSTAL ALUM (LUMP AND GROUND).

O SOLE MANUFACTURERS OF THE WELL-KNOWN ALUMINOFERRIC

RED OXIDES,

Containing over 92 per cent. peroxide of iron, or reduced, at prices below any other makes of equal percentage.

VENETIAN REDS,

RED OXIDE PAINT

FOR THE TRADE,

At lower prices than your own cost figures.
Paint made to any specified quality.

ADOLPHE CROSBIE, Ld.

Colour Works, Wolverhampton, England.

ENQUIRIES SOLICITED.

CIALITIES:—

IA ASH 58% Phosphoric Acid
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LTCAKE Oxalic Acid
EACH Tartaric Acid
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RAX Carbolic Acid
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USSIATES Glycerine
ANIDES OLEINE
TALS
NERALS
IMSTONE
LPHUR

Castor Oil
Olive Oil
Essent. Oils
Glucose
Grape Sugar
Cane Syrup
Treacle
Nitrate of Silver (Pure)

Amidol, Metol, Glycin, Thiocarbamid and other Photographicals, Lumieres, Dry Plates, &c., &c.

IMPORTERS—Commission Merchants—EXPORTERS.

Telephone No. 1050.

FUERST BROS.

LONDON: 17, Philpot Lane, E.C.

Telegrams—"FUERST, LONDON."

HEADQUARTERS FOR ALL HEAVY OR FINE CHEMICALS,

Pharmaceutical Products,

Photographic Developers,

Drysalteries and Drugs,

Also OILS and PRODUCE.

SAMPLES AND PRICES ON APPLICATION.

CORRESPONDENCE SOLICITED.

Tenders.

SCARBOROUGH GAS COMPANY.

AMMONIACAL LIQUOR.

THE Directors of the Scarborough Gas Company invite TENDERS for the whole of the AMMONIACAL LIQUOR, to be produced at their Works for One or more Years from the 1st day of July next.

Tenders may be submitted either at a fixed price per ton or on a sliding scale, regulated by the price of sulphate. Preference will, however, be given to the latter.

Further particulars may be obtained on application to the undersigned. Tenders (duly endorsed) must be delivered (addressed to the Chairman of the Company) not later than noon, on Saturday, the 10th of June next.

The Directors do not bind themselves to accept the highest or any Tender.

By order,
J. HOLLIDAY,
Engineer & Secretary.

Gas Offices, 32, Westborough, Scarborough, May 17, 1899.

Miscellaneous.

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PASTE BLUES for Paper Makers. Berlin, Paris, and Danzig. B.O.V., D.O.V., R.O.V., free from arsenic.—Milnsbridge Chemical Co., Huddersfield.

PRACTICAL Working Foreman wants Situation as OLEINE MAKER. 20 years' practical experience in Nitro-Benzol, Nitro-Toluol, Bi-Nitros, Mirbane Oil, Anilide Toluidene, Para Toluidene, Aniline Salt; good references, moderate salary.—Address, "Oleine," *Chemical Trade Journal* Office, Manchester.

ANALYTICAL CHEMIST desires RE-ENGAGEMENT in Works Laboratory; rapid and accurate analyst, long experience, good references, moderate salary. Address, "Stoke," *Chemical Trade Journal* Office, Manchester.

WANTED, Manufacturers who work up Pyridine Bases, Ammonia, Pitch, etc., to quote for Crude Liquor resembling Bone Oil.—Reply, "Cumberland," *Chemical Trade Journal* Office, Manchester.

WANTED, DETAILS.—Manufacture of Ammonium Chloride from Sulphate.—"Chloride," *Chemical Trade Journal* Office, Manchester.

CARR'S DISINTEGRATOR Wanted; must be in good working order.—State size, price, and where it may be seen, to "Disintegrator," *Chemical Trade Journal* Office, Manchester.

TO Mine Owners: Wanted, by large Metal Extraction and Chemical Works, regular supplies of Pyrites or Ores, containing Sulphur, Copper, Zinc, or other metals. Address, in first instance, to "Box 36," *Chemical Trade Journal* Office, Manchester.

CHEMICAL and Metal Extraction Works are open to deal with large and regular supplies of Ores containing Sulphur, Iron, Copper, Zinc, Lead or other metals. The works are in favourable situation for taking up supplies at any of the Mersey ports, Liverpool, Runcorn, Garston, &c. Facilities would be given to prove or develop new or special processes. Offers of such are invited. Address, "Zinc," *Chemical Trade Journal* Office, Manchester.

MARKET CLERK Wanted, by old-established, first-class firm in the Chemical Manure trade; must have had considerable experience in Sulphates, Nitrates, and Phosphates. Liberal share of profits given to a really first rate man. Applications will be treated confidentially.—Reply, "S.N.," *Chemical Trade Journal* Office, Manchester.

IRON OXIDE (Bog Ore), best quality, for the purification of gas, containing up to 85 per cent. hydrated oxide of iron, and absorbing whilst being used high percentage of blue.—Alphonse Schmitt, Rotterdam.

Miscellaneous—Cont.

WORKS FOR SALE.

ESTABLISHED OVER FORTY YEARS.

THE Owner of a WOOD CARBONIZING WORKS is desirous of retiring from business, and offers Land, Works, and Valuable Patents.

There are nearly 16,000 square yards of Land, of which nearly 9,000 are freehold, and the remainder held on small small chief, nearly all of which could be utilised for building purposes without interfering with the manufacturing business.

Two good streets run up to the land, which is just outside the Corporation boundary, and is fenced all round.

The Works are drained to the satisfaction of the Urban District Council, and are situated within easy distance of several railway stations (goods) and are inside the collecting area.

A good Dwelling-house and Three Cottages, and an unlimited supply of good water, free.

Address, "Retort," c/o Davis Bros., 32, Blackfriars Street, Manchester.

GERMAN AGENCY.—A wholesale firm, with connection of several years' standing amongst the wax-goods manufacturers and wax-bleachers in Germany and Switzerland, desires to represent first-class Paraffin Works. Advertisers would buy on their own account. References exchanged.—Address, in first instance, "N.R. 1156," care of Rudolf Mosse, Berlin, S.W., 19.

YOUNG MAN, well connected, with considerable laboratory experience in Chemistry and wet and dry assaying of ores and products, is open to an appointment as Analytical Chemist or Assistant in Metal or Chemical Works; excellent testimonials.—Address, A. R. Jeffery, c/o Campion, Fore St., St. Marychurch, Torquay.

WANTED, 500 tons COPPER PYRITES, f.o.b. Goole, containing not less than 49/50 % sulphur, copper residue returned.—Address, "Copper," *Chemical Trade Journal* Office, Manchester.

A PRIVATE FIRM of Sulphate Makers are desirous of making Contracts with Gas Companies for the purchase of the whole or part of their Ammoniacal Liquor.—Those Companies having any for disposal, either now or in the future, kindly communicate with "Liquor," *Chemical Trade Journal* Office, Manchester.

RE-ENGAGEMENT Wanted as Manager of a Gunpowder Factory; thorough practical experience in the manufacture of Smokeless Powders.—Address, "Poudre," c/o Messrs. Street & Co., 30, Cornhill, London, E.C.

BI-SULPHITE of LIME.—Apparatus for manufacturing same FOR SALE, never been used.—Apply, "Bi-Sul.," *Chemical Trade Journal* Office, Manchester.

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ON SALE, Vertical Steam Pump, Cameron's type; ram, 3½ ins. diameter; cylinder, 6 in diameter; 5 inch stroke.—T. and R. Lees, Engineers, Hollinwood, near Manchester.

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A large quantity of SECOND-HAND *BREWER'S HOGSHEADS, BARRELS, KILDERKINS, FIRKINS, and PINS always in stock.—Apply for prices, JOHN GROUT & Co., Ltd., Back and Vat Makers and Cooper Burton-on-Trent.*

J. STIFF & SONS,

MANUFACTURERS OF

CHEMICAL APPARATUS

IN VITRIFIED STONEWARE.

ACID PANS, ACID PIPES & CONNECTIONS, RECEIVERS, CONDENSING WORMS, RETORTS, COCKS, JARS, BOTTLES & INSULATORS, BATTERY JARS, POROUS CELLS, &c., &c.

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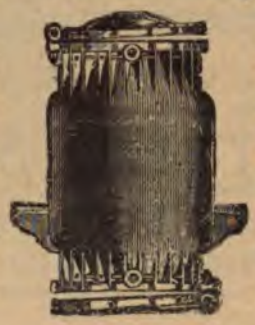
FULLER'S

BONE STEAMER.

Softens the Bones without extracting any of the Nitrogenous Substance.



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BONE STEAMING AND GRINDING PLANT.

GRINDING MACHINERY

FOR EVERY DESCRIPTION OF MATERIAL.

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MANGANESE,

Up to 95%

FLUOR SPAR, finest 98/99 per cent white quality.

WILHELM MINNER, Arnstadt, Germany.

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FLUOR SPAR

of all kinds supplied by

CHR. GOTTL FOERSTER, Ilmenau, Germany.

CASEIN.

Purity Guaranteed. Prices very

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Glue, Celatine, & Size Manufact

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ALBUMENS, Pastes, Arabic So

Vegetable and Animal Size,

GLUES, PREPARED PITHS, P

tated Bone Phosphate, Neatsf

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W. KING, Benson St., LIVER

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Up to 95 %.

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Finest 98/99 per cent. quality.

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WIRE WEAVER, MACHINE MAN AND GENERAL MILL FURN

Sole Maker of MILBU

Patent Conoidal Stone Grind

Especially suitable for materials, Wet or

Works and Warehous

Back Church Lane. *Parcel Dept.:* Baseme Corn Exchange

31, MARK LANE, LON

Liverpool: Exchange Chambers, Glasgow: West Campbell st.

CANNINGTON, SHAW & CO., LIMITED,

CARBOYS.

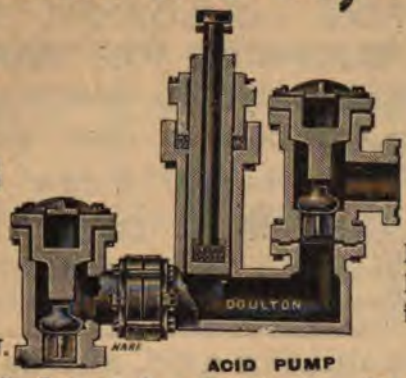
SHERDLEY GLASSWORKS, ST. HELENS

DOULTON & CO., LTD., LAMBETH, LONDON,

MANUFACTURERS OF

STONEWARE CHEMICAL APPARATUS OF EVERY DESCRIPTION.

PRICE LISTS ON APPLICATION.



ACID PUMP

IMPROVED STONEWARE ACID PUMPS.

Each Pump prior to leaving the Factory is put into actual work and tested

SHOWROOMS: St. James's Sq., Manchester; 100, Soho St., Liverpool. Granville St., Birmingham; 38 and 40. Bothwell St., Glasgow; 6, Rue de Paradis, Paris.

PETER SPENCE & SONS,

Manchester Alum Works, Manchester; and Goole Alum Works, Goole.

SOLE MANUFACTURERS OF

SULPHALUMINE

(THE PUREST BRAND OF SULPHATE OF ALUMINA).

CRYSTAL ALUM (LUMP AND GROUND),

ALSO SOLE MANUFACTURERS OF THE WELL-KNOWN ALUMINOFERRIC.

VALUATIONS.

Messrs. W. J. FRASER and CO., Engineers, 98, Commercial Road East, London, undertake Valuations of and Reports on Engineering Plant and Machinery for Company Formation, Partnership, Fire Assessment, Probate and other purposes. Drawings and Specifications prepared for New Engineering Plant on fixed charges.

Telephone No 4413. Telegraph: "FRASER, ENGINEER, LONDON."

MANGANESE

Up to 95 %

FLUOR SPAR,

Finest 98/99 per cent. quality.

HARD DIEMAR, Eigersburg, Germany.

MANGANESE,

Up to 95%

FLUOR SPAR, finest 98/99 per cent white quality.

WILHELM MINNER, Arnstadt, Germany.

TELEGRAMS: "Neill," St. Helens.

TELEPHONE: No. 20, St. Helens.

CHEMICAL PLANT.

W. NEILL & SON.

SPECIALITIES:

WALL ENGINES — High or Low Speed.

DRIVING ENGS.

GRINDING MLS. — All high efficiency.

FILTER PRESSES. — For all purposes. Castings. Burner Fronts, etc.

BLOWING ENGS.

PUMPS — of every description, with Improved Valves.

AIR COMPRESSRS. — Vertical and Horizontal

GLYCERINE PLANTS.

St. Helens Junc., Lancs.

SOAP MACHINERY.

Metal and Work.

Tanks and Wrot. Ironwork

Tenders.

TO MANUFACTURING CHEMISTS & OTHERS

THE Corporation of Birkenhead invite OFFERS for the Purchase and Removal of the AMMONIACAL LIQUOR produced at the Gas Works, for a period of one, three, or five years, commencing on the 1st July, 1899. A pipe is laid between the Gas Works and the River Mersey for the conveyance of liquor into the Contractor's boats, or, if desired, the Corporation will provide appliances on their own Railway Siding to pump the liquor direct into the Contractor's tank wagons.

The Contractor whose tender is accepted will be required to enter into a formal contract or agreement with the Corporation, upon the specific terms and conditions contained in the draft contract which has been prepared by the Town Clerk, and deposited in his office for inspection.

Forms of tender and further particulars may be obtained from Mr. T. O. Paterson C.E., Gas Engineer, at the Gas Works, Thomas-street.

Tenders, sealed and endorsed "Tender for Ammoniacal Liquor," to be sent in to me not later than 5 p.m., on Friday, 26th May, 1899.

The Corporation do not bind themselves to accept the highest or any tender.

By Order,
ALFRED GILL,
Town Hall, Birkenhead, 4th May, 1899. Town Clerk.

TO TAR DISTILLERS AND OTHERS.

THE Corporation of Birkenhead invite OFFERS for the Purchase and Removal of the SURPLUS TAR produced at their Gas Works during a period of one, three, or five years, commencing on the 1st July, 1899.

Deliveries will be made at the Gas Works either into Contractor's tanks on the Gas Works Railway Siding or into tanks for conveyance by road to boats.

The Contractor whose tender is accepted will be required to enter into a formal contract or agreement with the Corporation, upon the specific terms and conditions contained in the draft contract which has been prepared by the Town Clerk, and deposited in his office for inspection.

Forms of tender and further particulars may be obtained from the Gas Engineer, Mr. T. O. Paterson, C E, Gas Works, Thomas-street.

Tenders, which must be on the printed form supplied, sealed and endorsed "Tender for Tar," to be sent in to me not later than 5 p.m. on Friday the 26th May, 1899.

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By Order,
ALFRED GILL,
Town Hall, Birkenhead, 4th May, 1899. Town Clerk.

Miscellaneous.

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CASEIN. Purity guaranteed. Prices very low. Address: D. Muller & Co., Hamburg, Germany.

WANTED, for Chemical Works in Scotland, JUNIOR CHEMIST. Previous experience in works not essential, but applicants must have thorough chemical education.—Apply, stating age and other particulars, to "J.C.S.," *Chemical Trade Journal* Office, Manchester.

PARTNER WANTED in an Aniline Dye and Chemical Business, in London; established 15 years; with sound and safe connection. Nett profits about £500 per annum. Advertiser would sell outright, or remain partner for a few years longer, according to arrangement. Suitable opportunity for an independent position. Apply, "Aniline," *Chemical Trade Journal* Office, Manchester.

POSITION as Under-Manager or Chemist. Ten years' works experience. Special knowledge on the treatment of Tin, Lead, and Antimony Drosses, and in the manufacture of Solder.—Address, "Chemist," *Chemical Trade Journal* Office, Manchester.

WOOD CHEMICAL WORKS. Situation required; well up in miscible and solvent naphtha, acetates of lime, lead, soda, &c. Address, "Naphtha," *Chemical Trade Journal* Office, Manchester.

Miscellaneous—Cont.

CHEMICAL BUSINESS for Sale. Chemical Works in North East of England (Seaport) for Sale, as a going concern, with immediate entry. Profits guaranteed for two years. Price about £5,000.—Mackenzie & Fortune, S.S.C., 143, Princes-Street, Edinburgh.

TO Sulphuric Acid Manufacturers: One high-pressure Steam Engine, with air pumps complete, steam cylinder 7 in. diameter, 12 in. stroke, two air cylinders, 11 in. diameter, 11 in. stroke, £35. One wrought iron lead-lined egg compressor vessel, 7 ft. diam., 7 ft. long, £50. Two wooden lead-lined covered store acid tanks, about 10 ft. by 6 ft. by 5 ft., with manhole lids and branch pipes, £15, each.—Apply, McDougall Bros., Millwall Docks, London, E.

GOOD VARNISH MAKER requires a SITUATION; well up in all Oil Varnishes; 16 years' experience —Address, D. W. Collins, 2, Bath-road, Mitcham, Surrey.

FORMALDEHYDE.—For SALE, best Process of Manufacture, successfully tested in practice —"Formaldehyde," *Chemical Trade Journal* Office, Manchester.

FOREMAN Wanted, who thoroughly understands the Chemicals used by brewers; state age, experience, and salary.—"Brewers," *Chemical Trade Journal* Office, Manchester.

PRACTICAL Working Foreman wants Situation as OLEINE MAKER. 20 years' practical experience in Nitro-Benzol, Nitro-Toluol, Bi-Nitros, Mirbane Oil, Aniline Toluidene, Para Toluidene, Aniline Salt; good references, moderate salary.—Address, "Oleine," *Chemical Trade Journal* Office, Manchester.

WANTED, position as CHEMIST or MANAGER; good practical experience in Rectified Vitriol, Hydrochloric, Nitric Acids, pure; Epsom and Glauber Salts, Tin, Zinc, and Iron Salts, Bleach, Oleine Oil, etc; moderate salary.—"Moderate," *Chemical Trade Journal* Office, Manchester.

ANALYTICAL CHEMIST desires RE-ENGAGEMENT in Works Laboratory; rapid and accurate analyst, long experience, good references, moderate salary.—Address, "Stoke," *Chemical Trade Journal* Office, Manchester.

WANTED, Manufacturers who work up Pyridine Bases, Ammonia, Pitch, etc., to quote for Crude Liquor resembling Bone Oil.—Reply, "Cumberland," *Chemical Trade Journal* Office, Manchester.

WANTED, DETAILS.—Manufacture of Ammonium Chloride from Sulphate.—'Chloride,' *Chemical Trade Journal* Office, Manchester.

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CHEMICAL and Metal Extraction Works are open to deal with large and regular supplies of Ores containing Sulphur, Iron, Copper, Zinc, Lead, or other metals. The works are in favourable situation for taking up supplies at any of the Mersey ports, Liverpool, Runcorn, Garston, &c. Facilities would be given to prove or develop new or special processes. Offers of such are invited. Address, "Zinc," *Chemical Trade Journal* Office, Manchester.

IRON OXIDE (Bog Ore), best quality, for the purification of gas, containing up to 85 per cent. hydrated oxide of iron, and absorbing whilst being used high percentage of blue.—Alphonse Schmitt, Rotterdam.

YOUNG MAN, well connected, with considerable laboratory experience in Chemistry and wet and dry assaying of ores and products, is open to an appointment as Analytical Chemist or Assistant in Metal or Chemical Works; excellent testimonials.—Address, A. R. Jeffery, c/o Campion, Fore St., St. Marychurch, Torquay.

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PURE WHITE SULPHATE OF ALUMINA, BLANC FIXE, CHLORIDE, NITRATE, AND SULPHIDE OF BARIUM.

UNITED ALKALI COMP.'S

HYPO-SULPHITE OF SODA,

WALTHER FELD & CO.'S

PURE PRECIP. CARBONATE OF BARYTES 96/98%

Also Hydrate and Anhydrous Alumina, Chloride and Carbonate of Alumina, Aluminate of Soda, Hydrate of Barium, &c.

Agents: JULIUS HULSEN & CO., NEWCASTLE-ON-TYNE

36¾"
McNEIL'S PATENT UNBREAKABLE STEEL LADLES
These Ladles are manufactured by a patented process, each from a single steel plate without weld or rivet. They are extremely light, being at the same time the strongest and most durable in the market. Ladles to contain 56lb. of metal only weigh about 7lb. each. They are made of all capacities from 30lb. to 50 cwt., with or without lips; also mounted or unmounted. They are also suitable for chemical and metallurgical processes. List of sections and prices on application to
CHAS. McNEIL, Jr.
KINNING PARK IRONWORKS, GLASGOW.
31"
32"

TUBES

IRON and STEEL, and FITTINGS,

for Gas, Water, Steam, Liquid Ammonia, and Hydraulic Work. All kinds and sizes—Welded or Riveted.

Tanks, Pans, and all kinds of Ironwork for Chemical Work.

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ENGINEERS, PAGEFIELD IRONWORKS,

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AIR COMPRESSING ENGINES.

GAS COMPRESSING ENGINES.

150,000 I.H.P. ALREADY AT WORK.

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EXHAUST AND BLAST FANS.

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Manchester Alum Works, Manchester; and Coole Alum Works, Coole.

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The Illustration represents an improved type of Machine adapted for mixtures in the manufacture of **Emulsions, &c.,** also for **Milk Sterilizing,** as recommended by the Medical Profession,—especially for Infants and Invalids.

The Machine is fitted with our patent Stirring Apparatus to work by hand. All inside parts being coated with Pure Tin. Underneath the pan is fitted a "Bunsen" Gas Generator for heating

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Tenders.

MANCHESTER CORPORATION GAS WORKS.

AMMONIACAL LIQUOR.—The Gas Committee of the Corporation of Manchester are prepared to RECEIVE TENDERS for the PURCHASE and REMOVAL of the AMMONIACAL LIQUOR to be produced at the Gathorn, Rochdale Road, and Bradford Road Gas Works during a period of 21 months, commencing at noon on the 30th day of June, 1899. The Committee do not bind themselves to accept the highest or any tender. Sealed tenders, addressed to the Chairman of the Gas Committee, and endorsed "Tender for Ammoniacal Liquor," must be delivered at the offices of the Gas Department, Town Hall, on or before Thursday, the 8th day of June, 1899.

Forms of tender and further particulars may be obtained on application (in writing only) to Mr. Charles Nickson, Superintendant of the Department. A deposit of one guinea (which will be returned on receipt of the tender) must accompany each application for a tender form.

By Order of the Gas Committee.

WM. HENRY TALBOT,
Town Clerk.

Town Hall, Manchester,
12th May, 1899.

SCARBOROUGH GAS COMPANY.

AMMONIACAL LIQUOR.

THE Directors of the Scarborough Gas Company invite TENDERS for the whole of the AMMONIACAL LIQUOR, to be produced at their Works for One or more Years from the 1st day of July next.

Tenders may be submitted either at a fixed price per ton or on a sliding scale, regulated by the price of sulphate. Preference will, however, be given to the latter.

Further particulars may be obtained on application to the undersigned. Tenders (duly endorsed) must be delivered (addressed to the Chairman of the Company) not later than noon, on Saturday, the 10th of June next.

The Directors do not bind themselves to accept the highest or any Tender.

By order,

J. HOLLIDAY,
Engineer & Secretary.

Gas Offices, 32, Westborough,
Scarborough, May 17, 1899.

Miscellaneous.

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PRUSSIAN and ULTRAMARINE PASTE BLUES for Paper Makers. B.O.V., D.O.V., R.O.V., free from arsenic.—Milnsbridge Chemical Co., Huddersfield.

CASEIN. Purity guaranteed. Prices very low. Address: D. Muller & Co., Hamburg, Germany.

ADVERTISER, with thorough chemical training, desires SITUATION in London. Three and a-half years in Chemical Works. Experienced in drawing, correspondence representing, and general work.—Apply, "Photo," *Chemical Trade Journal* Office, Manchester.

POSITION as Under-Manager or Chemist. Ten years' works experience. Special knowledge on the treatment of Tin, Lead, and Antimony Drosses, and in the manufacture of Solder.—Address, "Chemist," *Chemical Trade Journal* Office, Manchester.

EVENING EMPLOYMENT required by Analytical Chemist, in or near City (London). Engaged in Laboratory during day. Good references. Particulars, stating terms, etc., address "B.L.," *Chemical Trade Journal* Office, Manchester.

WANTED, Post in a Manufacturing Business, where advertiser, aged 24, with major chemist's qualification, would find his scientific training of use; has had practical experience; moderate salary; could command capital in the event of a partnership being considered.—Address "F.C.S.," 141, Fenchurch Street, London, E.C.

YOUNG Chemical Engineer, who obtained Diploma at Technical College in Berlin, with good certificates, knowing English, German, French, Russian, and Polish languages, desires SITUATION in Laboratory, or Management in a Chemical Factory.—Address, Mr. Garlicki, 2, Archfield Road, Tufnell Park, London, N.

Miscellaneous—Cont.

FOR SALE, AIR COMPRESSOR (new) Steam and Air Cylinders, 5 in. 6 in. stroke; four COPPER CASED STEAM PANS; jacketted, flanged tops, wrought iron cases outside; size, about 3ft. 2in. by 2ft. 2in. inside; sold cheap; several Weighing Machines, by Avery; three Vertical Wall Pumps, 1¾in. to 2½in. rams; one 3½in. ram Vertical Steam Pump, by Turner; three 9ft. by 4ft. new Vertical Steam Boilers; one 20 ft. by 6 ft. Lancashire Boiler; one 8 in. by 18 in. stroke new Horizontal Engine; two cast iron high pressure Jacketted Steam Pans, 24 in. wide, 2cin deep, nearly new; one 18 in. by 36 in. Inverted Engine and Galloway Boiler—For full details, address, J. Light, Wolverhampton.

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RAILWAY TANK TRUCKS, in good condition WANTED.—Apply, "Tanks," *Chemical Trade Journal* Office, Manchester.

PRACTICAL Working Foreman wants Situation as OLEINE MAKER. 20 years' practical experience in Nitro-Benzol, Nitro-Toluol, Bi-Nitros, Mirbane Oil, Anili e Toluidene, Para Toluidene, Aniline Salt; good references, moderate salary.—Address, "Oleine," *Chemical Trade Journal* Office, Manchester.

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VATS FOR SALE.—We have Six English Oak Vats, size from 350 barrels to 430 barrels each; also two about 100 barrels each.—Particulars, *Brightwells, Coopers* and Dealers in Old Casks, Burton-on-Trent.

ON SALE, Vertical Steam Pump, Cameron's type; ram, 3¾ ins. diameter; cylinder, 6 in. diameter; 5 inch stroke.—T. and R. Lees, Engineers, Hollinwood, near Manchester.

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MANUFACTURERS OF

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IN VITRIFIED STONEWARE.

ACID PANS, ACID PIPES & CONNECTIONS, RECEIVERS, CONDENSING WORMS, RETORTS, COCKS, JARS, BOTTLES & INSULATORS, BATTERY JARS, POROUS CELLS, &c., &c.

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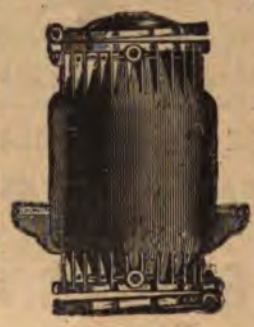

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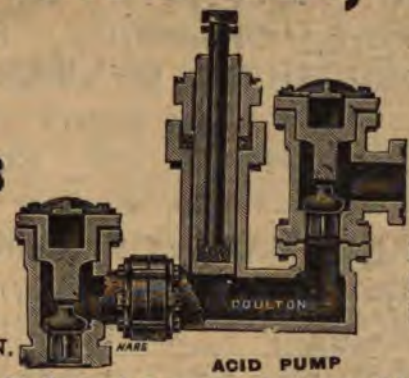

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Engineer & Secretary.

Gas Offices, 32, Westborough, Scarborough, May 17, 1899.

Miscellaneous.

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POSITION as Under-Manager or Chemist. Ten years' works experience. Special knowledge on the treatment of Tin, Lead, and Antimony Drosses, and in the manufacture of Solder.—Address, "Chemist," *Chemical Trade Journal* Office, Manchester.

EVENING EMPLOYMENT required by Analytical Chemist, in or near City (London). Engaged in Laboratory during day. Good references. Particulars, stating terms, etc., address "B.L.," *Chemical Trade Journal* Office, Manchester.

REQUIRED post in oil and grease works. Thorough knowledge of refining in all its branches, boiling, thickening, grease making, tallow melting, etc. Can erect plant. Excellent references. Address, "A.M.," *Chemical Trade Journal* Office, Manchester.

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YOUNG Chemical Engineer, who obtained Diploma at Technical College in Berlin, with good certificates, knowing English, German, French, Russian, and Polish languages, desires SITUATION in Laboratory, or Management in a Chemical Factory.—Address, Mr. Garlicki, 2, Archibald Road, Tufnell Park London, N.

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COMPRESSOR wanted. Steam driven air cylinder about 3 inches, stroke 6 in. with fittings. Acid Egg, capacity about 80 cubic feet with all connections. Apply, "Egg," Chemical Trade Journal Office, Manchester.

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ANILINE COLOURS.—Wanted, a Practical Chemist, who thoroughly understands the various manufactures.—Apply, "Colours," *Chemical Trade Journal* Office, Manchester.

RAILWAY TANK TRUCKS, in good condition WANTED.—Apply, "Tanks," *Chemical Trade Journal* Office, Manchester.

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ON SALE, Vertical Steam Pump, Cameron's type; ram, 3¼ ins. diameter; cylinder, 6 in. diameter; 5 inch stroke.—T. and R. Lees, Engineers, Hollinwood, near Manchester.

FOR SALE, quick delivery, three new Cylindrical ACID TANK TRUCKS, tank 15 ft. long by 4 ft. 1½ in. diameter. Also one TANK 15 ft. long by 3 ft. 2 in. diameter.—Apply, C. Roberts & Co., Ltd., Railway Wagon and General Works, Horbury Junction, near Wakefield.

VATS, TANKS, and other WOOD VESSELS (new and second-hand) for Sale. Send particulars of requirements to Shuters, Chippendales, and Colyers, Ltd., Vat Makers, High-street, Stratford, London, E.

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WOODEN VESSELS of every description, New or Second-hand; all shapes, dimensions, and capacities. We have on hand the largest stock in England, and firms requiring anything in this direction are kindly invited to write for particulars, etc., to Henry Roberts & Co., Vat and Back Makers, Bancroft Road, Mile End, London, E.

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COMPLETE 12-H.P. ELECTRO CHEMICAL INSTALLATION for testing Electrochemical and metallurgical processes. Chimney shaft, and ample room for erection of plant; general and private laboratories for investigations.

Processes and inventions can be tried by inventors, or tested and reported upon.—91, Blackfriars-road, London, S.E.

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The GROVE CHEMICAL CO., Ld., Crown Works,
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Ground Stoppered Carboys Supplied.

THE "LANCASTER" Steam Traps
REGISTERED TRADE MARK

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J. HOLLIDAY,
Engineer & Secretary.

Gas Offices, 32, Westborough, Scarborough, May 17, 1899.

COUNTY BOROUGH OF OLDHAM.

THE Gas Works Committee invite TENDERS for the TAR and AMMONIACAL LIQUOR to be produced at their different Gas Stations for a period of one or more years, commencing 1st July next.

The yearly make of Tar is about 7,600 tons, and of Ammoniacal Liquor about 2,500,000 gallons.

Particulars and Forms of Tender can be obtained on application to Mr. Arthur Andrew, Gas and Water Offices, Oldham, to whom Tenders are to be sent on or before Tuesday, June 20th, 1899.

A. NICHOLSON,
Town Clerk.

Oldham, May 23rd, 1899.

READING GAS COMPANY.

TAR.

THE Directors of the Reading Gas Company invite TENDERS for the purchase of their surplus TAR for One Year, commencing on the 1st July next.

Specifications for the Contract will be forwarded on application.

Rail communication direct to the Works.

Tenders endorsed "Tender for Tar," must be delivered not later than Monday, the 12th June, to

ARTHUR H. CANE,
Secretary.

7, King-street, Reading,
May 30, 1899.

Miscellaneous.

PRUSSIAN and ULTRAMARINE PASTE BLUES for Paper Makers. B.O.V., D.O.V., R.O.V., free from arsenic. — Milnsbridge Chemical Co., Huddersfield.

ACETATE OF LIME.
(Pyrolignite of Lime.)
Brown, 65-67%
is manufactured on a large scale, and sold direct to consumers at a moderate price, by
STORA KOPPARBERGS BERGSLAGS AKTIEBOLAG FALUN (SWEDEN).

ADVERTISER, with thorough chemical training, desires SITUATION in London. Three and a-half years in Chemical Works. Experienced in drawing, correspondence, representing, and general work.—Apply, "Photo," *Chemical Trade Journal* Office, Manchester.

ADVERTISER wants Situation. 20 years practical experience in Nitro-Benzol, Toluol, Bi-Nitros, Mirbane Oil, Oleine, Aniline Oil and Salt, Toluidene, Para. Good references, moderate salary. Address, "Oleine," *Chemical Trade Journal* Office, Manchester.

CONSULTING CHEMIST, of high reputation and qualifications, investigating process in United States during August, would undertake additional commissions of a chemical or physical nature.—Address, "Consultant," *Chemical Trade Journal* Office, Manchester.

FOREMAN.—Wanted for Chemical Work (Tobacco Factory) in America, reliable and trustworthy MAN, not over 35 years of age, with thorough knowledge of plant and machinery; must be able to handle labour.—State age, experience, and wage required to "Tobacco," *Chemical Trade Journal* Office, Manchester.

Miscellaneous—Cont.

AMMONIUM PHOSPHATE (Mono).—Wanted, INFORMATION as to Details of Manufacture, Expense, and Best Sources of Raw Materials. Quotations for hundred ton lots also solicited.—Address, "Fertilizer," *Chemical Trade Journal* Office, Manchester.

ELECTROLYSIS of ALKALI CHLORIDES.—Most Improved Method, with best practical results, to be sold. The process is most satisfactorily at work on a large scale in Germany.—Write for particulars to "Electrolysis," *Chemical Trade Journal* Office, Manchester.

RE-ENGAGEMENT Wanted, as Manager of a Gunpowder Factory; thorough practical experience in the manufacture of Smokeless Powders.—Address, "Poudre" c/o Messrs Street & Co., 30, Cornhill, London, E.C.

FOR DISPOSAL, a quantity of PYRITES BURNER FRONTS, almost new.—Full particulars on application to "Fronts," *Chemical Trade Journal* Office, Manchester.

WANTED, about 60 yards of 9in. or 10in. COPPER PIPES, must be in good condition; any about 15 or 16 B.W.G.—Address, "J.," *Chemical Trade Journal* Office, Manchester.

ANALYTICAL CHEMIST German, 25 years. Dr. Phil., 3 years' practical experience, principally in Calcium Carbide and Acetylene industry, DESIRES ENGAGEMENT in Works Laboratory.—Address in first instance, "Analyst," c/o Gould's Advertising Offices, 54, New Oxford Street, London, W.C.

CASEIN. Purity guaranteed. Prices very low. Address: D. Muller & Co., Hamburg, Germany.

WANTED, INFORMATION by Manufacturers, as to the best modern PLANT for dealing with Tanner's and Slaughter-house Refuse, for rendering fats, and obtaining glue, gelatine and other bye-products.—"Render," *Chemical Trade Journal* Office, Manchester.

FOR Sale by Private Treaty, the Works, Plant, Machinery, and Freehold Land belonging to the Vegetable Parchment & Chemical Co., Ltd., in liquidation situate at Flint, North Wales, on the Chester Main Road, close to the L. & N. W. Ry. Good water supply.—For full particulars and permission to view, apply to the Liquidator, J. Alfred S. Hassal, 6, Lord-street, Liverpool.

TO BE LET on Lease or Sold, a valuable WHARF and LAND for Chemical Works on River Thames, near Gravesend, with three Barge Berths, 120 ft. frontage to the river; applicant could be assisted.—Apply, "Box 9," *Chemical Trade Journal* Office, Manchester.

WANTED, STEARINE PITCH, of hard, half hard, elastic and soft qualities.—Offers to "A. B.," *Chemical Trade Journal* Office, Manchester.

TO Chemical Manure Manufacturers.—Advertiser (25) is open for engagement as manager or assistant manager and chemist. Extensive and varied experience in all grades of phosphates, Belgian, Carolina, Tennessee, etc., etc. Mixed manures of all kinds, etc. Sulphuric acid manufacture, etc., etc. Moderate salary; excellent references.—Apply, "Manure," *Chemical Trade Journal* Office, Manchester.

RAILWAY Tank Wagons for hire.—Address, Brotherton and Co., Ammonia Distillers, Leeds.

FOR SALE, four COPPER CASED STEAM PANS; jacketted, flanged tops, wrought iron cases outside; size, about 3ft. 2in. by 2ft. 2in. inside; sold cheap; several Weighing Machines, by Avery; three Vertical Wall Pumps, 1¾in. to 2½in. rams; one 3½in. ram Vertical Steam Pump, by Turner; three 9ft. by 4ft. new Vertical Steam Boilers; one 20 ft. by 6 ft Lancashire Boiler; one 8 in. by 18 in. stroke new Horizontal Engine; two cast iron high pressure Jacketted Steam Pans, 24 in. wide, 20 in deep, nearly new; one 18 in. by 36 in. Inverted Engine and Galloway Boiler; two 5 ft. Ball Grinding Mills, with gearing and appliances; one Link Driving, 110 ft. by 18 in. wide, sold at half price; several Ropes and Belt Pullers; 6 cwt. old Copper and Brass.—For full details, address, J. Light, Wolverhampton.

J. STIFF & SONS,

MANUFACTURERS OF

CHEMICAL APPARATUS

IN VITRIFIED STONEWARE.

ACID PANS, ACID PIPES & CONNECTIONS, RECEIVERS, CONDENSING WORMS, RETORTS, COCKS, JARS, BOTTLES & INSULATORS, BATTERY JARS, POROUS CELLS, &c., &c.

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FULLER'S

BONE STEAMER.

Softens the Bones without extracting any of the Nitrogenous Substance.

Extraction of the Grease within an hour.

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BONE STEAMING AND GRINDING PLANT.

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FOR EVERY DESCRIPTION OF MATERIAL.

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FLUOR SPAR, finest 98/99 per cent white quality.

WILHELM MINNER, Arnstadt, Germany.

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of all kinds supplied by

CHR. GOTTL FOERSTER, Ilmenau, Germany.

CHEMICALS, Pure and Commercial,

For Scientific and Technical Purposes.

Specialities: Ethers, Chloroform.

POLGLASE & CO Tyne Vale Chemical Works, Skinnerburn-rd., Newcastle-on-Tyne

SAML., MEGGITT & SONS, LTD.,

Glue, Gelatine, & Size Manufacturers,

SUTTON-IN-ASHFIELD, NOTTS.

(Late BINDLEY & SON, Ltd., SMETHWICK.)

ALBUMENS, Pastes, Arabic Solution Vegetable and Animal Size, Gums CLUES, PREPARED PITHS, Precipitated Bone Phosphate, Neatsfoot Oil, Greases, Manure Materials, &c.

W. KING, Benson St., LIVERPOOL.

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Up to 95 %.

FLUOR SPAR,

Finest 98/99 per cent. quality.

EDUARD DIEMAR, Elgersburg, Germany.

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MILLSTONE BUILDER,

WIRE WEAVER, MACHINE MANUFACTURER AND GENERAL MILL FURNISHER.

Sole Maker of MILBURN'S Patent Conoidal Stone Grinding Mills.

Especially suitable for certain materials, Wet or Dry.

Works and Warehouse: Back Church Lane. *Parcel Dept.:* Basement of the Corn Exchange

31, MARK LANE, LONDON.

CANNINGTON, SHAW & CO., LIMITED,

CARBOYS.

SHERDLEY GLASSWORKS, ST. HELENS

Liverpool: Exchange Chambers. Glasgow: West Campbell-st.

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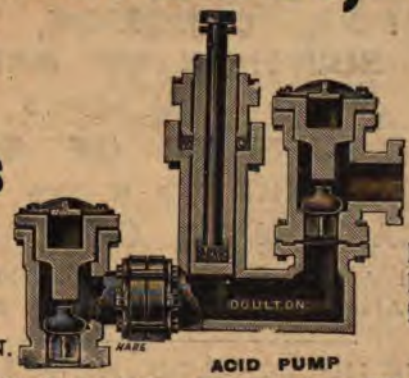
MANUFACTURERS OF

STONEWARE CHEMICAL APPARATUS OF EVERY DESCRIPTION.

PRICE LISTS ON APPLICATION.



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IMPROVED STONEWARE ACID PUMPS.

Each Pump prior to leaving the Factory is put into actual work and tested.

SHOWROOMS: St. James's Sq., Manchester; 100, Soho St., Liverpool. Granville St., Birmingham; 38 and 40, Bothwell St., Glasgow; 6, Rue de Paradis, Paris.

PETER SPENCE & SONS,

Manchester Alum Works, Manchester; and Goole Alum Works, Goole.

SOLE MANUFACTURERS OF

SULPHALUMINE

(THE PUREST BRAND OF SULPHATE OF ALUMINA).

CRYSTAL ALUM (LUMP AND GROUND).

ALSO SOLE MANUFACTURERS OF THE WELL-KNOWN ALUMINOFERRIC.

VALUATIONS.

Messrs. W. J. FRASER and CO., Engineers, 98, Commercial Road East, London, undertake Valuations of and Reports on Engineering Plant and Machinery for Company Formation, Partnership, Fire Assessment, Probate and other purposes. Drawings and Specifications prepared for New Engineering Plant on fixed charges.

Telephone No. 4413. Telegraph: "FRASER, ENGINEER, LONDON."

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FLUOR SPAR,

Finest 98/99 per cent. quality.

ARD DIEMAR, Elgersburg, Germany.

MANGANESE,

Up to 95%

FLUOR SPAR, finest 98/99 per cent white quality.

WILHELM MINNER, Arnstadt, Germany.

GRAMS: "ll," St. Helens.

TELEPHONE: No. 20, St. Helens.

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W. NEILL & SON.

SPECIALITIES:

WALL ENGINES — High or Low Speed.

DRIVING ENGS.

GRINDING MLS. — All high efficiency.

FILTER PRESSES. — For all purposes.

Castings. Burner Fronts, etc.

BLOWING ENGS

PUMPS of every description, with Improved Valves.

AIR COMPRESSRS. — Vertical and Horizontal.

GLYCERINE PLANTS.

St. Helens Junc., Lancs.

SOAP MACHINERY.

Metal and Work.

Tanks and Wrot. Ironwork

Tenders.

TIPTON GAS WORKS.

COAL CONTRACTS.

THE Gas Committee of the Tipton Urban District Council, are prepared to receive TENDERS for the supply of GAS COAL, for a period of one or two years, to be delivered carriage free to the Gas Works siding (L. and N. W. Ry.)

Specifications and Form of Tender may be obtained at the Gas Works on application to Mr. Vincent Hughes, the engineer and manager.

Sealed and Endorsed Tenders to be sent to me the undersigned not later than 10 a.m. on Saturday, 17th inst.

The committee do not bind themselves to accept the lowest or any tender.

By Order.
JNO. W. WARING,
Clerk to the Council.

Public Offices Tipton, 1st June, 1899.

COUNTY BOROUGH OF OLDHAM.

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A. NICHOLSON,
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Oldham, May 23rd, 1899.

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Rail communication direct to the Works.

Tenders endorsed "Tender for Tar," must be delivered not later than Monday, the 12th June, to

ARTHUR H. CANE,
Secretary.

7, King-street, Reading,
May 30, 1899.

SUTTON, SOUTHCOATES, AND DRYPOOL GAS COMPANY, HULL.

THE Directors of the above Company invite TENDERS for the surplus TAR and AMMONIACAL LIQUOR produced at their Works during the twelve months ending 30th June, 1900.

Probable quantity of Tar, 500 tons; probable quantity of Ammoniacal Liquor, 1,100 tons.

Tenders for Liquor must state price per ton per degree Twaddel's Hydrometer, from 4 to 8 degrees.

Tenders to be sent to the undersigned, on or before the 26th June, 1899, marked "Tender for Tar," or "Liquor."

The Directors do not bind themselves to accept the highest or any Tender.

DAVID WOOD,
Secretary.

Offices—St. Marks St., Hull, June 7th, 1899.

Miscellaneous.

Replies to Advertisements addressed to the "Chemical Trade Journal" Office, are forwarded to Advertisers, post free.

PRUSSIAN and ULTRAMARINE PASTE BLUES for Paper Makers. B.O.V., D.O.V., R.O.V., free from arsenic. — Milnsbridge Chemical Co., Huddersfield.

IMPORTANT. — Gentleman, with many years' experience (theoretical and practical) in working Spent Oxide of Iron for Cyanides, &c., wants either to manage, or to build and to manage, or to erect and set in operation, works of this kind. Has very good connections both for buying the raw materials and for selling the products. Apply for particulars to "Erect," *Chemical Trade Journal* Office, Manchester.

WANTED, a GENTLEMAN, about 30, to sell Finings and other Brewing Materials. One with a practical knowledge of Brewing and Chemistry preferred. Also a TRAVELLER with good connection to sell Cigars.—State qualifications, salary &c., to Manufacturers, 10, Great Eastern Street, London E.C.

Miscellaneous—Cont.

CHEMICAL PLUMBER requires Situation; Thorough Practical Man, used to putting up new work. Twelve years with large firm; total abstainer; age 31. Apply, "Plumber," *Chemical Trade Journal* Office, Manchester.

WOOD CHEMICAL WORKS. Situation required; well up in miscible and solvent naphtha, acetates of lime, lead, soda &c.—Address, "Naphtha," *Chemical Trade Journal* Office, Manchester

TARTARIC ACID.—Chemist would agree with factory interested in the manufacture of Tartaric Acid for trying a NEW PROCESS proved successfully in laboratory.—Address, "Tartaric," *Chemical Trade Journal* Office, Manchester.

WANTED, back sets of "Analyst," "Journal Chem. Soc.," and "Soc. Chem. Ind." —State price and particulars to E. Halliwell, Alexandra Crescent, Dewsbury.

FOR DISPOSAL, a quantity of PYRITES BURNER FRONTS, almost new.—Full particulars on application to "Fronts," *Chemical Trade Journal* Office, Manchester.

FOR Sale by Private Treaty, the Works, Plant, Machinery, and Freehold Land belonging to the Vegetable Parchment & Chemical Co., Ltd., in liquidation, situate at Flint, North Wales, on the Chester Main Road, close to the L. & N. W. Ry. Good water supply.—For full particulars and permission to view, apply to the Liquidator, J. Alfred S. Hassal, 6, Lord-street, Liverpool.

TO BE LET on Lease or Sold, a valuable WHARF and LAND for Chemical Works on River Thames, near Gravesend, with three Barge Berths, 120 ft. frontage to the river; applicant could be assisted.—Apply, "Box 9," *Chemical Trade Journal* Office, Manchester.

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FOR SALE, four COPPER CASED STEAM PANS; jacketted, flanged tops, wrought iron cases outside; size, about 3ft. 2in. by 2ft. 2in. inside; sold cheap; several Weighing Machines, by Avery; three Vertical Wall Pumps, 1¾in. to 2⅝in. rams; one 3½in. ram Vertical Steam Pump, by Turner; three 9ft. by 4ft. new Vertical Steam Boilers; one 20 ft by 6 ft. Lancashire Boiler; one 8 in. by 18 in. stroke new Horizontal Engine; two cast iron high pressure Jacketted Steam Pans, 24 in. wide, 20 in deep, nearly new; one 18 in. by 36 in. Inverted Engine and Galloway Boiler; two 5 ft. Ball Grinding Mills, with gearing and appliances; one Link Driving, 120 ft. by 18 in. wide, sold at half price; several Ropes and Belt Pulleys; 6 cwt. old Copper and Brass.—For full details, address, J. Light, Wolverhampton.

VATS FOR SALE.—We have Six English Oak Vats, size from 350 barrels to 450 barrels each; also two about 100 barrels each.—Particulars, Brightwells, Coopers and Dealers in Old Casks, Burton-on-Trent

ON SALE, Vertical Steam Pump, Cameron's type; ram, 3½ ins. diameter; cylinder, 6 in diameter; 5 inch stroke.—T. and R. Lees, Engineers, Hollinwood, near Manchester.

FOR SALE, quick delivery, three new Cylindrical ACID TANK TRUCKS, tank 15 ft. long by 4 ft. 1½ in. diameter. Also one TANK 15 ft. long by 3 ft. 2 in. diameter.—Apply, C. Roberts & Co., Ltd., Railway Wagon and General Works, Horbury Junction, near Wakefield.

A large quantity of SECOND-HAND BREWER'S HOGSHEADS, BARRELS, KILDERKINS, FIRKINS, and PINS always in stock.—Apply for prices, John Grout & Co., Ltd., Back and Vat Makers and Cooper Burton-on-Trent.

WOODEN VESSELS of every description, New or Second-hand; all shapes, *dimensions, and capacities.* We have on hand the largest *stock in England, and firms requiring* anything in this *direction are kindly invited to write for particulars, etc., to Henry Roberts & Co., Vat and Back Makers, Bancroft Road, Mile End, London, E.*

BLAYDON MANURE AND ALKALI COMP.'S

PURE WHITE SULPHATE OF ALUMINA

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PURE PRECIP. CARBONATE OF BARYTES 96/98%

Also Hydrate and Anhydrous Alumina, Chloride and Carbonate of Alumina, Aluminate of Soda, Hydrate of Barium, &c.

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McNEIL'S PATENT UNBREAKABLE STEEL LADLES
These Ladles are manufactured by a patented process, each from a single steel plate without weld or rivet. They are extremely light, being at the same time the strongest and most durable in the market. Ladles to contain 56lb. of metal only weigh about 7lb. each. They are made of all capacities from 30lb. to 50 cwt., with or without lips; also mounted or unmounted. They are also suitable for chemical and metallurgical processes. List of sections and prices on application to
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31"
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TUBES

IRON and STEEL, and FITTINGS,

for Gas, Water, Steam, Liquid Ammonia, and Hydraulic Work. All kinds and sizes—Welded or Rivetted.

Tanks, Pans, and all kinds of Ironwork for Chemical Work.

COILS for heating, super-heating, distilling and refrigerating purposes, to 500 feet long without joints.

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Grinding and Crushing Machinery.

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ALBUMENS, Pastes, Arabic Soluti Vegetable and Animal Size, Gu GLUES, PREPARED PITHS, Prec tated Bone Phosphate, Neatsfoot Greases, Manure Materials, &c

W. KING, Benson St., LIVERPO

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MILLSTONE BUILDE

WIRE WEAVER, MACHINE MANUFACT AND GENERAL MILL FURNISHE Sole Maker of MILBURN'S Patent Conoidal Stone Grinding Especially suitable for cert materials, Wet or Dry.

Works and Warehouse: Back Church Lane. *Parcel Dept.:* Basement o Corn Exchange

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Liverpool: Exchange Chambers. Glasgow: West Campbell-st.

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CARBOYS.

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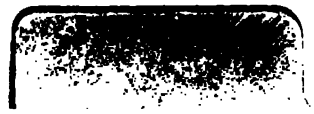
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